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BRITISH BIRDS

WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

AN ILLUSTRATED MAGAZINE DEVOTED
CHIEFLY TO THE BIRDS ON THE BRITISH LIST

EDITED BY

H. F. WITHERBY M.B.E. F.Z.S. M.B.O.U.

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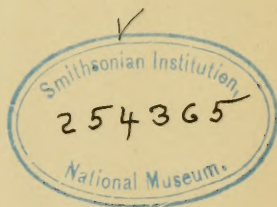
Rev. F. C. R. JOURDAIN M.A. M.B.O.U.

AND

NORMAN F. TICEHURST O.B.E. M.A. F.R.C.S. M.B.O.U.

Volume XIV.

JUNE 1920—MAY 1921.



H. F. & G. WITHERBY

326 HIGH HOLBORN LONDON

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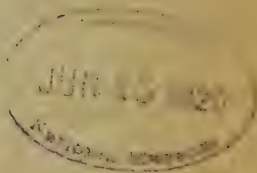
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A PRACTICAL HANDBOOK OF BRITISH BIRDS.

Edited by H. F. WITHERBY, M.B.E., M.B.O.U., F.Z.S., F.R.G.S.

Contributors :—E. HARTERT, PH.D., M.B.O.U., F.Z.S. ANNIE C. JACKSON,
H.M.B.O.U. REV. F. C. R. JOURDAIN, M.A., M.B.O.U. C. OLDHAM,
F.Z.S., M.B.O.U. N. F. TICEHURST, M.A., F.R.C.S., M.B.O.U.

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A PAIR OF SLAVONIAN GREBES AT HOME: Bird nearest nest is the male.

(Photographed by A. D. DuBois.)

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TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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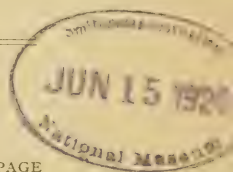
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NOTES ON THE BREEDING HABITS OF THE SLAVONIAN GREBE.*

BY

ALEXANDER D. DuBOIS.

(PLATE I.)

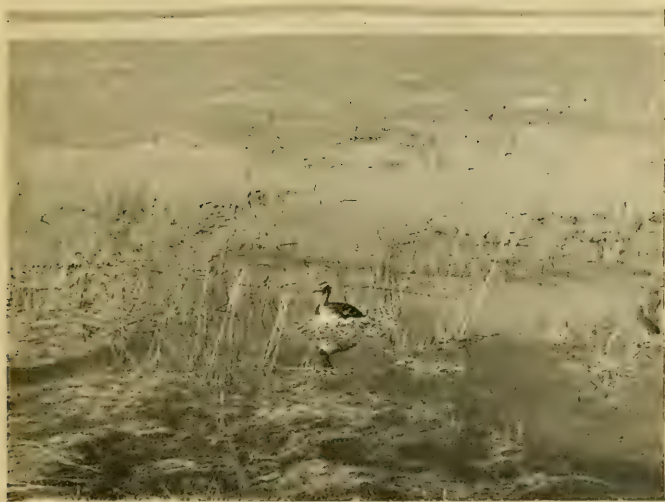
THE present observations were made in a temporary marsh formed by the flooding of a meadow in the extremely rainy spring of 1917. It lay in a crescent-shaped depression some ten or twelve acres in extent, curving about a knoll upon which stands a homesteader's cabin, in the south-eastern portion of Teton County, Montana, in the prairie region east of the Rocky Mountains.

On the open water of this pond two Grebes were seen on several days in May. On the third of June, while walking around the pond scanning its surface with a field-glass, I was suddenly amazed to see a Grebe sitting upon a nest which protruded above the water amid the scant vegetation. Careful examination showed the bird to be a *Podiceps auritus*. She slipped from the nest, as I slowly waded toward her, and swam about in the open water, anxiously watching my every movement. The interest was mutual. After watching the bird for some time I went up to the nest and found that it contained two eggs. Subsequent visits showed that the eggs were deposited at intervals of two days.

Whenever I appeared at the edge of the slough, it was the custom of the two Grebes to float about upon the area of open water with an air of supreme unconcern. They busied themselves constantly with their toilets, preening the feathers of all parts of their bodies and very frequently tipping or rolling themselves in the water to reach their under parts with their bills. In this half-capsized posture they would float for several seconds, exposing to view the strikingly prominent white area that is normally below the water-line. This preening and floating in different positions, on the part of both birds, proceeded without interruption during my entire stay, each day that I visited them. It became very evident that it was practised as a ruse to hold the attention of the intruder and thus divert him from their nest.

* This article has been abridged from a paper which appeared in the *Auk*, Vol. XXXVI., pp. 170-180, by kind permission of the author as well as of the Editor of the *Auk*, to both of whom we are also much indebted for permission to reproduce the accompanying photographs.—
EDS.

On the morning of June 12th, a camera was taken to the nest-site with the purpose of making photographs of the nest and eggs. On the land to the south, a homesteader with eight horses to his plough, was turning over the virgin sod. His furrows ended at the edge of the slough south-west from the nesting-site of the Grebes. Upon wading



SLAVONIAN GREBE ON HER NEST, SHOWING SITE AND SCANT
SURROUNDING VEGETATION.

(Photographed by A. D. DuBois.)

to the nest I found the six eggs shielded on the south-west side, by a partial covering of vegetation which had been pulled up on that side only. After making a photograph, and remaining for a time near the nest to observe the parent birds, I left the tripod and camera in position and went away. The female was continually gaining either confidence or bravery and had been swimming about in an agitated manner,

not far from me, as I stood quietly by the camera. Before I had got out of sight of the nest I saw her go to it and change the covering or shielding material to its opposite edge, thus sheltering the eggs from the too inquisitive gaze of the camera's eye. When I returned from the cabin the bird was on the nest incubating. She took to the water as I came up, but continued to swim back and forth among the scant neighbouring tufts of marsh grass. As I stood very quietly for some time behind the camera her boldness gradually increased, until at length I was able to photograph her near the nest, with the aid of only ten feet of rubber tubing attached to the shutter release. The making of these photographs consumed much time and continually the Grebe was growing bolder. She swam almost under the camera, and when I came close to the nest she made a dash at me, shooting entirely out of the water. This show of force was afterwards repeated frequently, and it sometimes ended with a violent splashing dive which sent a shower of spray over the camera outfit and the photographer. Meanwhile her spouse drifted quietly at a safe and respectable distance. Although one photograph of the bird on her nest was secured by means of a very long thread, the result was rather unsatisfactory.

On the following day, June 13th, I donned the hip boots again and stationed myself with the camera outfit, determined to see if patience would be rewarded by an opportunity to photograph the bird on her nest at close range. It was a wearisome experiment, but not without result, for eventually the Grebes became remarkably bold. The female was the first to approach. She swam around the nest repeatedly, but for a long time refused to venture upon it. For the most part the male witnessed her adventures from a discreet distance. Occasionally, however, he came up; and finally, while the female was showing her agitation by swimming hurriedly about, the male swam deliberately to the nest, climbed up its side, and sat on the eggs, facing me. A plate was exposed on this unexpected sitter but unfortunately was ruined by an accident before development. He became alarmed by my activities in changing plate-holders, or perhaps by the removal of my head from beneath the focusing cloth, and suddenly slipped off the nest into the water. Both birds were subsequently photographed together, near the nest.

I cautiously moved the camera somewhat closer and waited. The female frequently shot out of the water at me with a rush accompanied by a harsh cry, and sometimes ended her attack with a dive and a great splash. Eventually she went

upon the nest, and once in contact with her eggs, she became invincible. I photographed her thus; then moved the tripod toward her, slowly and cautiously, keeping my head beneath the cloth. In this way the camera was placed within arm's length of the bird and another exposure made which resulted in the accompanying intimate portrait (page 7). I uncovered my head, but she remained firm, and when I



SLAVONIAN GREBE AT NEST, SHOWING VEGETATION PULLED UP
ON ONE SIDE OF THE NEST TO SHIELD THE EGGS.

(*Photographed by A. D. DuBois.*)

extended my hand toward her she reached out her long neck and delivered a vicious, stinging stab with her sharp bill.

The exposed situation of this nest is shown in several of the photographs. It consisted of a mass of coarse grasses, many of them fresh and green, floating in about a foot of water, the body of the nest below the water-line being of such bulk as to almost touch the muddy bottom. The nest-

lining, in the bottom of the well-hollowed cavity, was very wet and soggy, being only slightly above the water surface when the nest was unoccupied, and probably below it when the weight of the bird was added to that of the nest. This lining was composed of decaying vegetation which was decidedly warm to the touch, in the sunshine, while the wet rim of the nest was cold. The eggs of this set were taken.

My next visit, on the eighteenth of June, disclosed the fact that the Grebes were not only present but were building a new nest not far from the old one. The nest seemed nearly completed. The two birds were floating near each other on the open water, preening their plumage in the ostentatious manner previously described.

At seven-thirty on the morning of June 21st, the new nest contained two eggs, partially covered, especially on the north-west side, which was the direction from which I approached the slough. There was a striking difference in the colouring of the two eggs, in view of the slight difference in their ages. One egg was a drab-tinted cream; the other a beautiful greenish tint with a freshness and delicacy which is difficult to describe, and which marked it as having just been deposited by the bird.

When I approached on the morning of June 24th, the Grebe was on her nest. She made herself as inconspicuous as possible by holding her head down, close to the nest rim. As I came within twenty-five or thirty yards of the nest the bird hastily pulled a covering of green-stuff over the eggs and slid silently into the water, disappearing completely. Although I watched for some time I did not succeed in catching even a glimpse of either of the birds.

On the occasion of the next visit (June 26th) I found the nest lightly covered with fresh green stems and blades which had been plucked by the bird. At the time I made the notation in my field book: "Never see the birds on the open water any more." However, on the next day, some time after I had left the nest, I did see one of the Grebes floating on the open water. The eggs had again been covered with fresh vegetation.

On the evening of July 12th, one of the birds was observed floating, silent and solemn, with head toward me, at the farthest side of the open water. It was evident at this time that the birds had changed their dress since my acquaintance with them at their first nest, for no yellow "horns" were now visible.

On July 13th, finding only four eggs in the nest, and pieces



SLAVONIAN GREBE WITHIN ARM'S LENGTH OF THE CAMERA.
(*Photographed by A. D. DuBois.*)

of egg shell both there and in the water, I searched carefully in the vicinity of the nest but without result. I could neither find the newly hatched young nor catch any glimpse of either parent. On the next day the conditions were the same, except that the eggs were slightly covered and a few small feathers had been left on the nest, showing that the bird had been upon it.

The twentieth visit, on the evening of July 15th, gave me an opportunity to examine the bird at close range. She was on the nest and allowed me to approach, cautiously, to a point twenty or thirty feet from her. She was considerably changed in appearance. The yellowish-white tip of the bill remained unaltered and the light line through the lower margin of the lore was observed to still persist, but the plumage of the head was much subdued, the yellow plumes having been exchanged for mere inconspicuous greyish streaks on the sides of the head. As I came up I could see a young bird poking its head through her wing. She soon left the nest with a startling rush, and swam rapidly away, leaving three eggs in the nest and two tiny youngsters in the water. The newly hatched downy young can both swim and dive in a feeble way. As I approached them they tried to escape by diving. When I held them in my hands they gave utterance to a little cry not greatly different from that of domestic chicks.

On the following day, July 16th, I failed to find either the parent or the young at the nest. The three remaining eggs were not covered. Again on the morning of the seventeenth, the nest held only the three uncovered eggs.

The next day, July 18th, at 7.30 p.m., another egg had hatched. The nest was not covered. It contained two eggs and nearly all of the opened shell of the other, which last circumstance was of course unusual. I heard the young bird, and by following the faint sound of its voice found it in the water, about six or eight feet from the nest. It was small enough to have just emerged from the shell. Its bill was very pink, and the naked red spot, or comb on its forehead very bright, though only slightly raised above the surrounding skin. The adult Grebes were not seen either on this visit or on July 20th, when I looked for them early in the morning. On the latter date the two eggs and the nest were cold and the orphan above mentioned was dead, on the slope of the nest just above the surface of the water. There was an opening in the top of its skull through which its brain had been removed by some small creature. This nestling had

probably never seen its parents, but had taken to the water wholly by instinct.

On the evening of July 22nd, the two eggs were cold and had not been disturbed since my previous visit, at which time their positions had been carefully noted. However, one of them was "pipped," and I could distinctly hear the voice of the bird within the shell. A search for the parent Grebes was without avail.

The next morning, although the sun shone upon the nest, the eggs were cold and the *fœtuses* in both of them were dead. No birds were seen. My last visit, on the evening of July 24th, yielded no further result. But I noticed now, that there was no water around the nest. It was stranded upon a mud-bar. This was undoubtedly the cause of forced abandonment of the nest. The Grebes were unable to reach it by a water route, and no other mode of travel was possible to them. A search around the water area, now very small and shallow, gave no further evidence. The Grebes were never seen again.

In reviewing the account of these observations certain groups of data suggest themselves for summarization.

It is interesting to note that only six days elapsed between the removal of the first set of eggs and the deposition of the first egg in a new nest.

The period of incubation is twenty-four or twenty-five days.

The change of colour which these eggs undergo is also worthy of note. I do not refer to the nest-stains caused by contact with the fermenting vegetation of the nest lining, but to a uniform colour change of the surface layer of the shell, which is brought about presumably by exposure to light and atmosphere. Referring to the eggs of the second nest by numbers it will be noted that egg number two, when first observed at 7.30 a.m. had apparently just been deposited. As previously stated, its colour was a very delicate bluish-green. Egg number one had already attained its final colour; a sort of drab-tinted buff, which rendered it less conspicuous in the nest. Twenty-four hours later, egg number two had changed to the same colour as egg number one. No data were recorded for egg number three in this respect. Egg number four, after thirty-six hours, was "nearly but not quite the same colour as the others." After it had been in the nest forty-eight hours it was noted as "same colour as other eggs." But egg number five could scarcely be recorded as fully changed after eighty-four hours had elapsed. These

notes would seem to indicate that the first laid eggs change colour more rapidly than the later ones. It may be noted in this connection that the first eggs are slightly richer in the light green pigment ; possibly, also, they receive less shelter from the parent bird than the later eggs.

The usual vocal performance of these Grebes, so far as I was able to determine, is a sort of " ko-wee, ko-wee," repeated at regular intervals. It might be compared to the squeak of a dry wheelbarrow, producing one double squeak at each revolution of the wheel. It is, however, a clearer quality than this comparison might indicate. Each " ko-wee " has a rising inflection and its two syllables are run closely together, with the accent on the last syllable.

MANX ORNITHOLOGICAL NOTES, 1918-19.

BY

P. G. RALFE.

THE following notes are intended to continue the record for the Isle of Man from the article in *British Birds*, Vol. XI., pp. 277-279.

I have yet so far failed to obtain any additional information of importance as to the summer residence of the small migrants in the Island. But I give some particulars, kindly supplied me by Mr. H. Laidlaw, of the Point of Ayre Light, as to the appearance of such species at our two northern lighthouses. Mr. Laidlaw, who previously had considerable experience of migration at the now famous station of Auskerry (Orkney), has been five years at Maughold Head and one at the Point of Ayre. Notes from our Manx lights have hitherto been rather scanty. The occurrences now given, though sometimes relating to species scarcely recorded as Manx, are quite what might be expected by comparison with those from the neighbouring coasts. A good deal of time spent on the extensive northern sands has not revealed much of interest. They do not appear to offer much attraction to migrant waders.

WHINCHAT (*Saxicola r. rubetra*).—This species has repeatedly occurred at the lights, and Mr. H. Laidlaw, who has met with it both at Maughold Head and the Point of Ayre, says that it is frequent both in spring and autumn. It has very rarely been recorded elsewhere in the Island, but Mr. P. M. C. Kermode saw several in September 1918 at Ballayelse, in the southern highland.

REDSTART (*Phœnicurus ph. phœnicurus*).—This species has a somewhat similar record in the Island, and Mr. Laidlaw has frequently seen it at both the above-mentioned stations.

BLACK REDSTART (*Ph. o. gibraltariensis*).—Mr. Laidlaw has seen specimens at both lights.

LESSER WHITETHROAT (*Sylvia c. curruca*).—The status of this species in the Island is very uncertain. Mr. Laidlaw met with it three times at the Point of Ayre light in 1919, once in May and twice in September.

BLACKCAP (*S. a. atricapilla*).—Mr. Laidlaw, in May 1918, saw a male at the Maughold Head light, the only one in his six years' Manx experience. Mr. James Bell, of Ramsey, has twice met with the Blackcap, once in a thicket at Port Moar (close to Maughold light), where it was in full song, and once at Rheaby, Glenmay. The species has never before been recorded in the Island, but will certainly occur, at least as a migrant, from time to time.

GARDEN-WARBLER (*S. borin*).—Mr. Laidlaw met with this species once only, at the Point of Ayre, in May 1919. But Mr. Bell, who some years ago was in constant touch with this station, had several specimens from the light, and even kept one alive for some time. This is a bird which has never been recorded as breeding in the Isle of Man, but being unlike the Blackcap, of inconspicuous colouring, as well as of secretive habits, it may easily be overlooked.

GRASSHOPPER-WARBLER (*Locustella n. nævia*).—Mr. Laidlaw has seen this occasionally at Maughold Head. In the Isle of Man it was first reported from a light, but has since been found in a number of localities as a summer resident.

YELLOW WAGTAIL (*Motacilla f. rayi*).—Mr. J. Bell has seen a party at Lough Cramstal, and Mr. Laidlaw another at the Point of Ayre.

RAVEN (*Corvus c. corax*).—In 1918 there was a nest in an extraordinarily accessible and conspicuous situation, on the low cliffs of the east side of Langness, on the inward side of a somewhat outlying knoll, a few feet from the top and about 15 from the bottom. On 19th March it contained five eggs, which had disappeared by the 25th. Ravens (often in pairs) haunt the low shores of the north almost daily both in summer and winter.

SWIFT (*Apus a. apus*).—In 1918 Swifts, after an absence of about fourteen years, settled again in small numbers in Castletown, where they had formerly been conspicuous as summer residents, and they reappeared in 1919. The new Ramsey colony (1914) also still exists.

NIGHTJAR (*Caprimulgus c. europæus*).—There can be no doubt that Nightjars breed on the wastes at the Ayre, where they have been repeatedly observed in summer by Mr. J. Bell (also by myself). Mr. Laidlaw has observed them catching moths at the Point of Ayre lantern.

TURTLE-DOVE (*Streptopelia t. turtur*).—About November 20th, 1918, Mr. A. Cooil shot a Turtle-Dove among Wood-Pigeons in a field at Knockrushen, near Castletown. The species is a rare straggler here. The date is very late, but can be paralleled in Ireland.

QUAIL (*Coturnix c. coturnix*).—In June 1919 Mr. E. Kneale heard a Quail several times in the fields near the Lhen, Andreas. About the same time, as I am informed by Rev. Canon Leece, quite a number were settled in the parish of Rushen, at the other end of the Island. Irregular visitant as it is, the Quail is well known, in the northern parishes at least, as "Wet-my-lip."

OYSTERCATCHER (*Hæmatopus o. ostralegus*).—The Oystercatcher appears, like the Redshank, to be increasing in numbers and extending its range on our coast. Last season I found it breeding in one, perhaps two, new localities in the south of the Island, and I twice found nests with four eggs, which I had never before met with.

SANDERLING (*Crocethia alba*).—On May 30th, 1919, Mr. J. A. Corteen found nine Sanderlings dead near "The Bungalow" under Snaefell, probably killed by striking the wires of the electric railway. The place is above 1,350 feet above sea-level and five miles from the coast. The specimen which I saw was in summer plumage.

COMMON TERN (*Sterna hirundo*).—In 1919 Mr. C. H. Wells and I again found this species breeding on the same ground as in 1917.

Clutches were not complete till mid-July, and usually consisted of three eggs, in marked distinction to those of the Arctic Tern, which on this coast has much more frequently two. The nests were in much the same situation as those of the other species, possibly a little farther from the sea on an average, and nesting material seemed to be used somewhat more abundantly.

LITTLE TERN (*S. a. albifrons*).—In 1919 the Little Tern seemed to have increased its numbers and extended its nesting ground. Like the last species it was laying very late, in mid-July.

KITTIWAKE (*Rissa t. tridactyla*).—In 1919 another colony of Kittiwakes (the third for the Island) has been formed within about half a mile of that mentioned in *British Birds*, 1909, p. 218, and perhaps as an overflow from it. Some hundreds of pairs were settled here, in a picturesque situation over the mouth of a cave tenanted by Shags, and under the brow of a massive headland.

HERRING-GULL (*Larus a. argentatus*).—In 1918 and 1919 orders permitting the taking of Gulls' eggs were again issued. I am informed by Mr. A. Harrison that Herring-Gulls now breed on Banks's Howe, close to the town of Douglas, and a considerable extension of their breeding-range has lately taken place on the Santon coast.

GREAT BLACK-BACKED GULL (*Larus marinus*).—Referring to *British Birds*, 1914, p. 315, 1916, p. 292, the breeding of one pair of this fine species takes place regularly each year in one locality on the west coast. In 1919 the nest was on the same slope of rock as in 1914. A gathering of Great Black-backs in surprising numbers still takes place each winter on the sands of Ramsey Bay under the town. During the present winter (1919-20) I have counted from 30 to 40 mature birds in company with Herring-Gulls.

BLACK-HEADED GULL (*L. ridibundus*).—On December 6th, 1919, Mr. A. Harrison saw a specimen in Douglas neighbourhood with the dark hood complete. Is this a late retention or an early assumption?

GREAT SKUA (*Stercorarius s. skua*).—On June 7th, 1919, Mr. H. Laidlaw saw one on the beach at the Point of Ayre.

SOME NOTES ON THE HARLEQUIN-DUCK.

BY

CHARLES E. ALFORD, F.Z.S.

THOUGH the Harlequin-Duck (*Histrionicus histrionicus*) is only a straggler to Great Britain, I suspect that it is of much more frequent occurrence than is commonly supposed; for it is extremely shy, and judging by my own experience of the bird, it would, in nine cases out of ten, be well out to sea long before the intruder could approach sufficiently near to identify it. It seems not improbable, therefore, that the few stragglers that occasionally catch the eye of an observer represent but a small proportion of those that actually visit the coasts of Britain.

Albeit the Harlequin is still but an accidental visitor to our shores, and though it can scarcely be considered an abundant species in any inhabited region of the world, I found it fairly plentiful on the North Pacific coast of Canada during the colder months of last winter, when it was my good fortune to have it under almost daily observation from the middle of December until its disappearance about the second week in February.

Though the Harlequin was always the rarest of my aquatic visitors, the fact that it appeared regularly and in comparatively large numbers as far south as Victoria, B.C., throughout a great part of last winter, whereas I only saw a single individual during the corresponding season of 1913-1914, seems to suggest either that it is becoming more abundant, or that the severe cold in the more northerly regions during December and January drove them farther south, and in greater numbers than usual; for only stress of weather will cause the Harlequin to venture far from home, even in the winter. The latter, therefore, seems the more likely explanation, and is borne out, moreover, by the dates of its appearance in the south. At Atlin, just south of the Yukon boundary line, the temperature in December was five degrees, and in January six degrees, below the average—the period during which I found the Harlequin most numerous—whilst that of February was fourteen degrees above the average, and it is, at any rate, significant that after the seventeenth of that month I never saw a single individual.

Their first appearance last winter was on the morning of November 18th, when one male and two females appeared

in the bay and remained for several hours preening their feathers by the water's edge. It was not until December 16th, however, that the Harlequins began to visit us regularly; but from that date onwards they were fairly constant visitors, generally appearing in flocks of from three to eleven individuals, the largest party I have ever seen together numbering six males and five females. The males nearly always outnumbered the females, three to two being the average ratio during the period covered by my observations.

Of the many peculiarities that distinguish the Harlequin from other members of its family, its obvious distaste for the companionship of other species could not fail to attract the notice of the observer. The majority of ducks, though they keep together when travelling, invariably break up their ranks as soon as they alight on the water, individuals of many different species mingling indiscriminately as they swim or drift lazily on the surface. Not so the Harlequins; they keep to themselves, and, as though afraid of losing touch with one another, adopt a definite formation as they swim through the water.

Let us suppose the party to number four males and two females. The males will lead the way, each individual swimming close behind and slightly to one side of his leader, with the females in the rear in similar order, the whole party assuming a step-like or, in military parlance, echelon formation. The next moment, by a sudden turning movement, the group will form into line and swim along side by side, and so bunched together that the flank of each individual touches that of his neighbour. The females always seem to keep together. When both sexes are represented in the party, one rarely sees a female swimming between two males, "mixed bathing" evidently being taboo amongst the Harlequins.

This, of course, merely refers to my observations during the winter; it would naturally be otherwise in the breeding-season. Nor must it be assumed that the actions described in the foregoing lines are entirely constant. The habits of all birds are subject to a certain amount of variation, and there is no reason to suppose that those of the Harlequin are any exception. I think, however, that most people familiar with this duck will agree that the behaviour I have attempted to portray is very characteristic of the species.

When seen at a short distance, with the sun playing on his gorgeous livery, the male Harlequin can hardly be mistaken

for any other member of the *Anatidæ*, the Summer Duck—which he most closely resembles in appearance—being an inland species of quite different habits. But when for any reason the colouring is obscured, the comparative shortness of the bill, which even at a distance is very noticeable, should always tend to arouse one's suspicions. There are, however, several other characteristics that help to establish its identity—the curious formation in which it swims, to which I have already referred; its general cobby appearance; its unusually active movements; and, above all, its extreme buoyancy. So marked, indeed, is this last peculiarity, that it would at once attract the attention of even the most casual observer. When diving, too, it seems to plunge more violently than other ducks, as though in need of extra force to counteract its buoyancy.

Extremely shy and vigilant, it takes alarm at the slightest sign of danger, and appears to rely on its strength of wing rather than on its power of diving in order to escape from its enemies. The only call-note that I have heard is a low piping whistle, more closely resembling the note of the Sand-piper than any other sound with which I am acquainted. It is uttered constantly when swimming on the surface, and frequently when it rises from the water.

The diet of the Harlequin consists of shell-fish and aquatic insects. It takes its food by day, the spot selected for this purpose being usually the end of some rocky headland in a situation not too exposed to the elements. It feeds right under the shore against the rocks, a habit from which it never seems to depart. Other species, though they may be partial to shallow waters, may often be seen diving in the more open parts of the bay, where the water is not too deep; but only on very rare occasions have I observed the Harlequin feeding at a greater distance than a dozen feet or so away from the shore.

The same rigid discipline that seems to govern all its actions is in no way relaxed even when it feeds. Swimming deliberately to the selected ground, it commences its diving operations as though by word of command, all the members of the party diving together and rising again to the surface in perfect unison, a habit common to many species of duck, but much more strongly developed in the Harlequin.

It is said to be essentially marine in its habits during the winter months, and my own observations certainly bear this out, for though there are several large lakes in close proximity to the coast in this part of the world that literally

teem with duck of various species, I have never yet met with a single Harlequin away from the sea.

The breeding range of the Harlequin-Duck extends from the Polar regions to as far south as Iceland, Newfoundland, and Kamtschatka. On the North Pacific coast it has been found nesting as far south as Vancouver Island ; and though I have not yet had the opportunity of studying its breeding habits for myself, I hope to do so at no distant date, for I have seen enough of *Histrionicus* in the winter months to convince me that a great deal yet remains to be learnt about the ways of this fascinating duck.

NOTES

LONG-TAILED TITMOUSE BUILDING AT UNUSUAL HEIGHT.

THERE must be few of the smaller birds that build at a more variable height than the Long-tailed Titmouse (*Æ. caudatus roscus*). Those nests at what may be called an ordinary height, say from four to ten feet from the ground are common enough, and heights up to twenty feet or so on the bough of an oak are fairly frequent in the Weald of Sussex and Kent, and probably elsewhere also. Elevations higher than this seem to have been seldom recorded, but this may to a considerable extent be due to the difficulty of finding them, especially when they are built in the tops of such trees as conifers. Had it not been that my brother watched the birds building, a nest whose height I measured on April 2nd last in S.W. Kent would probably have passed unnoticed. It was situated in the tufted top of an otherwise branchless fir tree, fifty-seven feet from the ground. The Rev. F. C. R. Jourdain informs me that he has a note of one in a similar situation in Derbyshire in 1898, thirty feet from the ground ; Mr. C. B. Wharton recorded one (*Zool.*, 1882, p. 187) at fifty feet, in an oak ; while one mentioned in the *Birds of Yorkshire* (p. 107), as being inside an old Magpie's nest, was probably at a considerable elevation, though no figure is given.

N. F. TICEHURST.

EARLY ARRIVAL OF REDSTART IN NORTHUMBERLAND.

ON March 27th at 6 a.m. I heard the notes of a strange bird, and on looking out saw a cock Redstart (*Ph. ph. phœnicurus*). Later in the day I saw it again, searching for flies among the rocks at the foot of Bamburgh Castle, and was able to be quite certain of identification. It had no white on the wings, and its notes were undoubtedly those of a Common Redstart.

AUDREY GORDON.

INCREASE OF PREDACEOUS BIRDS.

DURING the war, owing to the withdrawal of gamekeepers, there has been a considerable increase of what is called "vermin," in our neighbourhood (Burwash, Sussex). The woodlands of Dallington Forest, and many other extensive woods, coverts, and coppices in this part of the Weald, gave harbourage for the almost unrestricted increase of Jays,

Magpies, Sparrow-Hawks and Kestrels. Thirty years ago one could not take a walk across our fields in spring and summer without seeing Kestrels hovering over the meadows and grasslands. During the first ten or twelve years of this century the Kestrel became a rare bird, comparatively. In some of those years I did not see in the aggregate half a dozen distinct examples of the species. Magpies have increased enormously, from being somewhat rare they now abound. As an index to their numbers, I may mention that a neighbour, Mr. William de Winton, of Southover Hall, informed me that on one day of the past autumn over sixty were counted at one time on a field of new sown oats, not far from the Hall. Sparrow-Hawks have multiplied, and this increase has been accompanied by their greater boldness and rapacity. I take a neighbouring manor of about 1,000 acres in extent, with a fair stock of Partridges, as an example, and on which there is a reliable and efficient gamekeeper, who gives me the following details, which in several cases I have verified by handling the trapped birds. He tells me that in an experience of thirty years he does not remember that he ever had a dozen Partridges taken on the wing by Sparrow-Hawks prior to 1918. Last year (1919) he and his assistant found the bodies of at least twenty-five mature Partridges, besides Wood-Pigeons, which had been struck down and partially eaten by these birds. By setting traps round the partially-devoured prey, he secured over twenty Sparrow-Hawks, only two of which were males. So far this year (1920) he has found six Partridges killed and caught five female Sparrow-Hawks by trapping. My informant mentions that a few days ago, whilst taking his rounds, a Partridge pursued by a female Sparrow-Hawk flew into a hedge near by, and he just managed in time to put out the Hawk and save the life of the Partridge. Macgillivray (*B.B.*, Vol. 3, p. 354) remarks, on the authority of Mr. Weir, as to the difficulty of decoying a Sparrow-Hawk into a trap. This does not seem to be the case in the Weald of Sussex at the present time. The gamekeeper who gives me his figures, suggests that the boldness of these birds is due to the decrease of Blackbirds and Thrushes, with other small birds, which took place in the fatal winter of 1916-17 and from which the countryside has not yet recovered; but I think it is more likely due to the increase of the Hawks and, consequently, the greater competition in procuring food. It will be of interest to observe in the future, whether the reduction in the number of Sparrow-Hawks, which would follow a resumption

of game-preserving, modifies or decreases their attacks on Partridges, and whether this enlargement of habit is transient or becomes permanent. If the capture of such large birds as Partridges and Wood-Pigeons is a normal habit, and not one of development, it seems somewhat incongruous that the trivial name of Sparrow-Hawk should have been given to this species.

H. W. FEILDEN.

SOME BIRD NOTES FROM SOUTH UIST.—Mr. Donald Guthrie, who was keeper on South Uist from 1883 to 1905, summarizes his experiences of the local avifauna under the above heading in the *Scottish Naturalist* (1919, pp. 145-150, 187-192; 1920, pp. 45-48). His observations are all interesting and some, from an historical point of view, important, but unfortunately lose in value from the almost total absence of accurate dates. Amongst others we would draw attention to the following:—

CARRION CROW (*Corvus c. corone*).—Mr. Guthrie states he has once found a nest of this species in Barra Sound and once on South Uist hill. There is no previous record of breeding.

HEN-HARRIER (*Circus cyaneus*).—The food of this species is said to consist chiefly of mice, rats, and voles, while sometimes they kill young rabbits, stripping the skin neatly back from the snout towards the tail before eating them. Occasionally they kill Grouse, but very rarely.

WHITE-TAILED EAGLE (*Haliaeetus albicilla*).—The author speaks of this bird as now very rare and soon to become extinct, and recalls the fact that John Lamont, who was keeper in South Uist for fifty years, told him that when he first knew the island they nested there freely.

SPARROW-HAWK (*Accipiter n. nisus*).—Once seen. There is only one previous record from the Outer Hebrides, Barra, November 8th, 1913.

BEAN-GOOSE (*Anser f. fabalis*).—Mr. Guthrie states that he has shot one or two, but the absence of dates makes it doubtful whether this is a fresh record or not. The only known record for the O. Hebrides is from S. Uist, March 1903.

SHELD-DUCK (*Tadorna tadorna*).—An interesting habit in connection with feeding is described. It was first observed in some young birds reared in captivity, though afterwards also seen in full-grown ones. When hungry these young ones used to come to the doorstep and begin to "mark time" with their feet, and it is suggested that this performance constitutes their method of squeezing worms to the surface of the ooze on the shore.

PINTAIL (*Anas acuta*).—A few pairs nest and both the male and female attend the brood.

WATER-RAIL (*Rallus a. aquaticus*).—The finding of the nest of this species on more than one occasion is mentioned. There do not appear to be any previous records of its breeding in the O. Hebrides.

CRESTED TIT REPORTED BREEDING IN SOUTH-WEST INVERNESS-SHIRE.—Mr. M. Matheson states (*Field*, March 6th, 1920) that *Parus cristatus scoticus* is resident in the old fir- and pine-woods of both Achnagarry and Glengarry, and that he has found one or two nests yearly in Glengarry for the last thirty years. If no mistake has been made, this is a very interesting observation, and it is curious that the presence of the bird in this district has hitherto been unknown to Scottish ornithologists, or, at all events, unrecorded. The range of the Scottish Crested Tit, for a long time considered to be confined to the Spey Valley, was recorded a few years ago as extending to east Ross-shire (see *Brit. Birds*, Vols. IX., p. 182 and XII., p. 165), and now a long way to the south-west by Loch Arkaig.

GREAT GREY SHRIKES IN ESSEX AND SURREY.—Mr. P. D. Hayward informs us that a Great Grey Shrike (*Lanius c. excubitor*) was seen by Mr. W. E. Glegg in Epping Forest on December 25th, 1919, and January 11th, 1920, and by himself on March 20th and April 2nd and 14th. On each occasion the bird, presumably the same individual, was seen in the same locality. Another is recorded (*Field*, April 17th, 1920) as having been seen on Ham Common on April 5th.

RED-BACKED SHRIKE IN EAST ROSS-SHIRE.—Miss Annie C. Jackson records an immature *Lanius c. collurio* obtained near Portmahomack on September 4th, 1919 (*Scot. Nat.*, 1920, p. 54). It appears to constitute the first authentic record of the species from the Moray area.

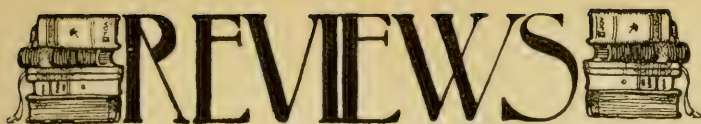
LITTLE OWLS IN YORKSHIRE.—We hear very little of Little Owls in Yorkshire, though it has penetrated into the southern half of that county, but as the species does not range far north on the continent it is not likely to spread quickly or far to the north in Great Britain. It is interesting to note, therefore, that Mr. W. Rowan records (*Nat.*, 1920, p. 134) that he heard one on March 10th, 1918, near Skipton in the West Riding, and Mr. E. W. Wade records another (*t.c.*, p. 140) taken in a rabbit trap on the Warter Estate in the Wold district on January 29th, 1920. Mr. Wade remarks that a pair was shot at Leconfield in the Wold in October 1911

WHOOPEES IN SCOTLAND IN SUMMER.—In connection with Dr. W. Eagle Clarke's note on this subject referred to in Vol. XIII. (p. 299), Mr. George Beveridge writes (*Scot. Nat.*, 1920, p. 54) that he saw a single Whooper (*Cygnus cygnus*) on May 24th, two on August 24th, 1918, and a pair on May 1st 1919, in North Uist, adding that he has also seen examples in Benbecula in summer and has been told "on good authority" that some remain all the year round on Loch Bee in South Uist.

REPORTED NESTING OF THE WHOOPER IN PERTHSHIRE.—The occurrences of the Whooper in summer in Ross-shire, western Inverness-shire, and the Outer Hebrides referred to above, lend a certain amount of support to the report by Mr. E. H. Place (*Field*, April 17th, 1920) of the nesting of a pair of these birds "on a hill loch in West Perthshire" in May 1919. The nest was placed on a small island surrounded by shallow water, covering deep, soft, peaty mud, and consisted of a large heap of moss, with a fairly deep cup at the top lined with feathers. The reporter did not see the eggs, but states that he has been informed since that four were laid and safely hatched, also that the birds had nested in the same place in 1918. A photograph of the birds and site is reproduced, but is on too small a scale and too indistinct to be of much value, but the erect carriage of the neck that is referred to by the recorder as characteristic of the species as opposed to the Mute Swan (*C. olor*) is just visible in one of the birds. This is the only indication given in the account of the correct identification of the species; there are many more details, therefore, that it would be desirable to possess before accepting it as a definite record of the breeding of the Whooper in Britain. It is to be hoped that some of our Scottish co-workers may yet be able to fill up the gaps.

VELVET SCOTER IN CO. GALWAY.—Mr. W. Rutledge states (*Irish Nat.*, XXIX., p. 26) that a Velvet Scoter (*Oidemia f. fusca*) was seen by Mr. J. Glanville off Mutton Island, on August 2nd, 1919. It is a rare visitor to Ireland and particularly to the west coast.

SPOTTED REDSHANK IN EAST RENFREWSHIRE.—Mr. John Robertson states (*Scot. Nat.*, 1920, p. 48) that he saw a single *Tringa erythropus* at Balgray Reservoir on September 6th and 7th, 1919, and remarks that this is the sixth autumn in which the species has occurred there.



REVIEWS

The Buzzard at Home. By Arthur Brook. "British Birds" Photographic Series. Demy 8vo, pp. 15 and 12 photographic plates. Witherby & Co. 3s. 6d.

THE present little volume forms a worthy continuation of the series, and the pictures are in the first rank of bird photographs, without taking into consideration the difficulties and dangers of obtaining them. Unlike many of the smaller birds opportunities of making an exposure on such a bird as the Buzzard are comparatively few, even when all the initial difficulties have been overcome, and when one thinks of all the innumerable "things" that can happen, any one of which may completely spoil any given exposure, Mr. Brook must be congratulated on the general level of excellence of his pictures and (shall we add?) his luck! For the pictures were procured in the course of five days of 8 to 9 hours each in a hide by the Buzzard's nest, and the visits of the parents to the nest average out by his narrative at only 7 *per diem*.

When found on June 5th, 1919, the nest contained two young about a week old. A hide was prepared on that day, and the first working visit was made two days later. The subsequent ones were on the 10th and 18th, and July 5th and 10th, on which last date the remaining young one (for one had previously fallen out of the nest and been killed) left the nest. Thus the fledging-period would appear to have been about 42 days. During the first two days the male did all the hunting, bringing the food to the hen at her perch about 100 yards from the nest and she alone carried it to the nest, for even at that early age the young appear to have actually fed themselves. During the later visits both birds seem to have hunted and brought food to the nest in about equal proportions. The nest was daily redecorated with twigs of mountain ash or tufts of grass, and this seems to be the work of the female alone. The food supplied consisted chiefly of moles and frogs, but mice, shrews, a young rat, a Jackdaw and young Wild Ducks were also brought; in the latter case a brood must have been found and systematically worked, for the two birds together brought five of them in the course of an hour! In spite of this, however, it is gratifying to note that Mr. Brook has no hesitation in placing the balance from the economic standpoint on the credit

side of the Buzzard. Another interesting fact that the author brings out is a cannibalistic tendency amongst young Buzzards in years when food is scarce, and he even states that he has succeeded in photographing the dreadful operation while in progress.

It is very gratifying also to note that there has been a marked increase of Buzzards in central Wales during the last three or four years, a result described, probably quite accurately, as one of the bye-products of the war. N.F.T.

A Naturalist's Calendar, kept by Sir William Jardine, Bart., LL.D., F.R.S., F.R.S.E., etc., at Jardine Hall, Dumfriesshire, from 1st January to 31st May, 1829. Edited by Hugh S. Gladstone, M.A., F.Z.S., F.R.S.E. Trans. Dumfriesshire & Galloway Nat. Hist. & Antiquarian Soc. 21st February, 1919.

ORNITHOLOGY is indebted to Mr. Gladstone for publishing this interesting fragment from the pen of one of our greatest old-time naturalists. The original was lent to him by the late Dr. Harvie-Brown some years ago and presumably now forms part of the latter's bequest to the Royal Scottish Museum. Sir William was a man of twenty-nine when he wrote his "Callendar," which may well have represented an attempt to follow in the steps of Gilbert White, and it is to be regretted that the effort did not survive a longer period than five months. The diary is arranged in columns containing daily details of the weather, height of barometer and morning and evening temperatures, with such observations on the birds and the appearances of leaves and flowers as he made from day to day. The bird observations, being for so short a period, naturally do not include much of importance, but a remarkable feature, that Mr. Gladstone points out, is the paucity of observations and the number of species of the *Sylviidae*, clearly indicating in his opinion that these summer visitors have greatly increased in Dumfriesshire in the last ninety years. Another fact that is brought out clearly in the observations is the apparently very short time taken by the Black-headed Gull (*L. ridibundus*) in acquiring its brown hood. Copious notes of explanation, many of local historical interest, by the Editor, add to the value of the reproduction

N.F.T.

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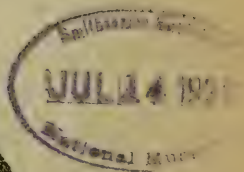
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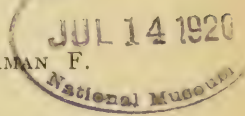
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NOTES ON SOMERSETSHIRE RAVENS.

BY

STANLEY LEWIS.

THE following notes are simple records of what the Ravens (*Corvus c. corax*) did at the cliffs at Cheddar, Somerset, in the early spring of 1919. Soon after my observations commenced I discovered that the fourth primary was missing in the left wing of the male bird and this helped me considerably in making sure of the sex of either bird when it had to be done quickly; for although the male was decidedly larger, there were times when after a momentary glimpse this gap, for so it appeared, turned an otherwise useless observation into an interesting one.

Both birds are resident in the Mendips all the year round, and one or both have daily regular beats over well-stocked rabbit-warrens. The bleached heaps of rabbit bones here and there speak plainly of how the appetites of these monstrous crows are appeased. When on these hunting excursions the Raven flies low, not exactly skimming the ground, but as compared with its usual altitude. I noted this on February 15th at Blackdown on a very foggy day, and again on April 1st at the old Priddy mines; the male bird passed at a height of about forty to fifty yards. Before and during nidification both birds often hunt together, as I have seen them on several occasions, miles from home.

The first nesting material was carried on February 4th. The birds selected a vertical fissure in one of the turret rocks, at the bottom of which reposed a lot of dead sticks, no doubt the remains of a former nest, probably the 1917 structure. On this old site they began to construct their new one, about 300 feet up from the roadway and forty sheer from the top.

Ravens are abroad at the first streak of daylight, making the cliffs resound with their defiant barks, those of the male syllabled by me as "Konk, Konk, Konk," which at the distance may be likened to the echoing sounds of a horn of a motor coming up the cliff road. Nest-building is shared equally by both sexes during the early morning and afternoon. In the middle of the day they are absent from the cliffs hunting their beats for food, returning (early February) about 3 p.m. The male arrives first, for they go off singly and come back singly, but usually in the same direction. On one occasion the female was very late in returning home, and the male treated me to a wonderful display of his vocal

powers; he was evidently calling his mate, and perched where he was, on the top of the wind rock, must have been audible miles away. She came in at 4 p.m., flying straight to the newly started nest, and followed closely by her mate. From below I could hear bubbling notes as of pleasure, much like the cooing of the Turtle-Dove, but rather louder and stronger and differing from the bubbling or musical notes which both birds utter occasionally.

Afterwards just a little nest-building was undertaken, and then at 4.30 p.m. both settled for the night, touching each other, on the branch of a deciduous shrub near the cliff top facing N.W. I cannot imagine why they should have chosen to roost in such an open situation, in the teeth of a piercing north wind and sleet, when so many sheltered nooks were near. Other spots were selected at times, one was quite a sheltered position farther up the road, between two fifty-foot cliffs and about 400 yards from the nest. This was occupied for many nights in succession, one of the birds always flying out over the road and in again the very last thing to see that all was safe.

When building, both birds often arrived at the nest together carrying the requisite materials. Each in turn hopped in and placed its burden, perhaps a stick, a lump of moss, wool, grass, leaves or rabbits' fur, as the case might be, and turning round and round worked hard at forming the cup-like portion of the structure; sometimes the male would not wait, but simply dropped his stick to the female or she took it directly from his beak. No live sticks were used in its composition, although there were plenty of small trees available, such as rowan, whitebeam, ash, as well as evergreens, yew and holly. Many stems of gorse were carried, and quite two-thirds were picked up from amongst the ivy growing on the headland above an old quarry on the opposite side.

As they went to and fro, both used the rippling musical notes, and another favourite note was, "Wort, wort, wort," uttered quickly two, three, and four times. I may here mention the tumbling antics of both—when the bird turns completely over on its back from a side movement, drifts along thus, and resumes its former position. Once both birds pitched close to each other, and for twenty minutes the male was in a very amorous mood; he persistently and gently stroked his mate on the mouth, around the eye and the side of the head, both meanwhile bowing their heads as ducks do; then he gently pecked again the side of her face, and suddenly attempted coition. She resented this behaviour

by waddling a few feet away, making a chattering noise. The male at once picked up a dead stick, and in a few seconds was across and into the nest with it. Nest-building was then again resumed by both ; I saw the male on three other occasions during nidification act in a similar manner, but without the head nodding and attempted pairing.

Weather seems to have had little effect upon their nest-building activities, for my notes show a succession of gales and storms, and during the whole period of watching these Ravens in February, March and April the wind hardly ever ceased its fury day or night. I have seen them carry sticks in a blinding snowstorm with half a gale of wind blowing ; come up over the ravine and wheel round, Buzzard-like, into the nesting cleft just as calmly as though the sun were shining. On some days they do not leave the cliffs at all, when it is evident that feeding has taken place not very far away.

During my watching I did not see either bird rob their last year's eyrie of any materials, neither did they settle on it, although the side of the nest protrudes from the horizontal ledge of rock and they passed it closely dozens of times. One morning a Kestrel persistently mobbed both birds on the opposite headland, where, as I have already pointed out, most of the nesting materials were picked up. As the Raven approached, the Kestrel flew up from his perch on the rocks, swerved and came almost in contact with it, swooping up above and resting for a second in the wind ; then as the huge crow, with dangling legs, poised a yard or so over the headland to pitch, down stooped the Kestrel, dodging under him and away up into the air again. The Raven uttered hoarse, but not very loud, cries and followed the hawk, both dodging and swerving about, the Kestrel always getting clear away without harm. The same thing went on in the afternoon, the Raven apparently enjoying the fun.

Building ceased on February 22nd, having occupied a period of eighteen days, and on the 25th the first egg was deposited. The nest contained its full complement of four on March 1st and incubation certainly commenced with the first egg laid, but not in earnest, for besides the time occupied in feeding, which never took place at the nest, the bird very often vacated the nest for short flights. Thus on March 3rd between 7.5 a.m. and 9 a.m. she indulged in five short flights and one of longer duration, the same thing happening again and again throughout the day ; finally at 5.45 she

again left and went northwards but soon came back, the male having returned in her absence. At 6.15 p.m., when I left, the female was quietly sitting on the eggs and the male squatting down closely on a jutting piece of rock about twenty feet above her.

For convenience, I may now state that incubation was undertaken entirely by the female, but for the sake of accuracy I must not omit to mention the solitary exception of a few seconds' duration that proves fairly conclusively that the male Raven does not incubate :—

March 3rd (extract from note) : " The female comes off again with the ' Kawk, Kawk, Kawk, Kawk ' note quickly repeated ; the cock answers from above, to her surprise I think, and they both fly off together across over the quarry and out of sight. The male returns in five minutes and flies on to the nest : female arrives and circles Buzzard-fashion overhead with vibrating notes ; the male, perched on the nest side contemplating the contents, utters a few hoarse notes, steps down into the nest, tail in view, and apparently attempts to squat or else he is busy placing something. The female flies on to the nest and at once begins to settle down in it, pushing the male gradually, for I can see his tail all the time, sideways out of her way ; his body is close to the rock and side of the nest, for his right wing is partly opened and flattened up against the cliff. The hen settles fairly on the nest, and the cock flops off and flies away."

During the period of incubation the male bird's duties are to clean himself, feed himself, announce to the female the approach of an intruder and bring in food for her. All these he carried out faithfully and well ; when he was on guard it was impossible to get to my station without his sending forth an alarm ; there were times, of course, when he was away hunting.

Some days the weather was simply vile, very cold north winds with a mixture of rain and snow, and on some days of this description the male was very silent, and would sit for an hour at a time on the branch of a bush close to the nest, and thoroughly clean himself. He usually announced his arrival with food by uttering a loud " Kawk " or " Wauk," when his mate, as a rule, immediately left the nest and flew to him. The following is an extract from my notes taken at the time :—

" March 6th : Mendips clothed with three inches of snow on the highest parts. At 4.15 p.m. the male came up on the opposite headland and pitched well in sight, calling

' Kawk, Kawk ' twice, the female immediately left the nest, answering him similarly, and flew straight across and pitched beside him, both well in view. The male at once picked up something from the ground in his beak and hopped once towards her, and I clearly saw her take whatever it was and swallow it. She did not wait longer, but came back at once and again settled on the eggs."

Extract of March 14th says : " Rise at 6 a.m., fine morning, bike to the cliffs, in station 6.15, male arrives 6.25, I can distinctly see food in his mouth, he pitches on the sloping ground of the opposite side of the ravine and calls the female. She does not come ; he calls several times—no response ; leaving food there he flies towards the nest and, sweeping close by, utters vibrating notes. Female flies off, uttering same notes, and both fly to the place where food is left ; female feeds and immediately returns to the eggs."

Once or twice when coming in he alighted on the nest, when this happened they left the nest at once and flew away together.

As my station was above and fairly close to the nest, it was interesting to watch the hen resume her position on the nest after leaving it. She pitched first on the rim, looked in for a second, then stepped down, or waddled like a duck would convey a better idea, amongst the eggs, squatted down and rocked herself with sideway movements apparently placing the eggs with her breast, and was then still. When I watched from this position she did not show the slightest concern at my presence and we spent hours watching each other, the bird blinking continually at me ; sometimes she sat with her head outwards from the rock, at another with her tail outwards, the change taking place after a flight. I did not see her change position whilst sitting. When leaving the nest and well away from it, one leg would be stretched down to its full length, her chin or throat scratched and often excrement would be voided.

On March 19th, 20th and 21st, a gale was blowing from the N.E., with snow and rain, and it was unsafe to venture on the cliff head, consequently no notes were taken on these dates, but on the 22nd I distinctly saw movements of her body as though chicks were hatched—she would shift her position slightly and put her beak towards the bottom of the nest beneath her breast. On this date chicks were no doubt present, but not fed. Reckoning from the last egg laid, my incubation-period coincides with that given in the *Practical Handbook of British Birds*.

March 31st was the last date I saw the female brood the young. No brooding was attempted by the male, neither did he ever feed the young, he seldom came to the nest even to remain a few seconds. I cannot say if my presence in any way affected him ; I should not think it did, as I was fairly motionless and well hidden by the rock. I watched the female several times search amongst the grass where she would find and swallow something. The grass abounded with a small black beetle, they were crawling slowly over the grass everywhere ; no doubt a source of food supply, at times, for herself and chicks. When feeding young no food could be observed. Her throat and neck were crammed so much at times that the mandibles could be clearly seen a little open as she winged her way towards me ; and the feathers of the neck stood out as though she wore a ruff, giving her quite a grotesque appearance. Alighting always on the rim of the nest she faced the four wide open mouths, down went her large bill well into the throat of chick No. 1, then out and well down into the throat of No. 2, out and down into No. 3, and feeding was over ; the mouths remained open for more, they still cried. From my point of view I did not know whether they had been fed or not, as I did not see any food. On one occasion after alighting on the nest she vomited perceptibly, lurching forward her head, and it appeared as though food came up into the mouth ; her beak was at once thrust down the open gape of a youngster. I never saw all four receive food at the same meal, sometimes one only was fed, sometimes three ; but it seemed that all four would have liked much more food than they got.

After feeding came cleaning. Extract from notes April 7th : " She steps with one foot only just down into the nest and commences to tug and pull strongly at the lining of it ; the nestlings scramble towards the inner part of the nest in a helpless moving bunch, for they try but fail to stand up. She continues to peck all over the bottom of the nest, ceasing for a few seconds gently to peck off something from one of the young. Now she is taking something from the inner sticks at the top of the nest and bites it up with the tips of the mandibles ; she wipes both sides of her bill on the outside sticks and is away across the gorge." On this date the young frequently pecked or tried to clean their backs, which showed darker than the wings owing to the quills on the latter. Ever and anon the female made vicious dashes at the Jackdaws when they approached to enter the cleft a couple of yards above the nest.

Extract from note April 9th : " Now she pecks and swallows something six times from the bottom of the nest ; as she swallows, her bill is pointed into the air ; now she pecks bits of fæces apparently off the young, and as she cleans their posteriors they scramble away to the other side of the nest ; she turns round and the white substance is adhering to the sides of her mandibles, quite a contrasting colour, then she flies away, pitches opposite, quite in view, and wipes each side of her bill in the grass."

One youngster, more forward than the others, was constantly wriggling, and with half-open mouth, stretching his neck over the side of the nest, so that the under part of his beak rested on the sticks of the rim, he pecked his back often. He failed to stand on this date (April 9th), but by propping himself up against the others was able to peck his breast. As the Jackdaws entered the cleft over the nest, they all opened their mouths and cried, mistaking them for the parent, so I presume that they could see.

On April 11th I clearly saw them shoot out their excretions over the rim of the nest, and the outside was fast putting on the appearance of being whitewashed, but the inner part was kept scrupulously clean by the female, who picked up every bit and ate it. Her favourite utterance when leaving the nest was " Kuk-kuk-kuk-kuk-kuk," eight to twenty times, very quickly repeated on the wing.

On April 20th, the young were feathered, while two, stronger than the others, were perched on the nest rim, preening themselves continually, and flapping their wings as though trying to fly. The parent came with bulging throat, and on this one occasion a conspicuous white lump held between the mandibles, this went into the first open mouth as she stood on the nest rim right amongst them ; they all stood to receive food. At 7 p.m. the two strongest young ones, after standing for some time on the nest rim with their beaks tucked in their wing-coverts, walked down into the nest, and all four cuddled together for the night. The female came and settled on a little rocky prominence a foot or so higher, but to one side of the nest, and as she did so they made feeble noises—just a good night, no movement. At 7.45 the male had not come in. The tails of the young on this day were noticeably rounded.

April 21st, weather fine, three young on nest rim. This afternoon the female after feeding the young, flew across the gorge to the male and lit on a slab of stone about a foot away. She pecked gently all the feathers of his back, nape and side

of the head, also around the gape, then walked round and did the same on the other side. Whilst being thus caressed, the male sat in a crouching attitude with head and neck pressed down to the body and beak pointing to the sky, but not vertically. I am quite sure it was the female caressing the male, as he was already perched on the stone when she fed the young; and my gaze was riveted on her every movement when she alighted near him.

On April 25th a very remarkable and tragic occurrence had taken place. One of the strongest chicks was hanging from the nest, head downwards, quite dead, its feet having apparently become entangled in the lining of the nest. I afterwards recovered this dead one, and on dissection it proved to have died from exposure: length $21\frac{1}{2}$ in., wings, from tip to tip $41\frac{3}{4}$ in., weight 1 lb. 13 ozs. After preserving it as a skin, I sent it to our county museum at Taunton.

Two of the young left the eyrie on April 27th, both following the female after feeding.

April 28th: Mendips covered in snow, and half a gale of wind blowing. The last occupant of the nursery appeared to feel its loneliness acutely; it passed a lot of time between meals pecking all over the nest, now hopping with flapping wings on to the rocky prominence or looking down as though it would fly at any moment; it even attempted to do so, then, as if on second thoughts, it clung with flapping wings to the bottom of the exterior of the nest and struggled up on to it again. It clung to every foothold near the nest, and finally flopped round the cliff face, and the eyrie was abandoned. The fledging-period was almost exactly five weeks.

On April 29th, I watched two young fed as they were resting amongst some flowering scurvy grass half-way up the cliff face.

The deep sounding "Wauk," "wauk," of this species, as it wings its way high overhead, immediately arrests the attention, and together with the appearance of the huge bill and outstretched neck at once reveals its identity; but many of its notes are difficult to syllable correctly. Those of the female, as she drove the Jackdaws off, were "Cluck, cluck, cluck," and "Wort, wort, wort."

ON THE FORMER ABUNDANCE OF THE KITE, BUZZARD, AND RAVEN IN KENT.

BY

N. F. TICEHURST, M.A., F.R.C.S.

In my *History of the Birds of Kent* (pp. 280 and 281) I suggested that it was not unreasonable to suppose that, at any rate a proportion of the Kites (*M. milvus*) that were so common about London and its outskirts in the fifteenth and sixteenth centuries, had their homes in the adjoining woodland districts of Kent. At the same time we had no direct evidence of the bird as a Kentish breeding species until it was on the verge of extinction in the early years of the nineteenth century. It has recently been my good fortune to obtain much important direct evidence relating to a period between the two above mentioned of the former status and actual great abundance of the Kite in Kent, as well as of the Buzzard (*Buteo b. buteo*) and Raven (*Corvus c. corax*).

Some three or four years ago Mr. A. H. Taylor published, in a local Almanac and Directory, a few extracts, from the Churchwarden's Accounts of Tenterden of the seventeenth century, relating to rewards paid for the killing of vermin. These at once suggested to me the desirability of going into these records at greater length. I have at last been able to do this, and have been surprised at the wealth of information contained in them with regard to the former status of certain mammals and birds in the Weald of Kent. It is not possible here to do more than summarize a part of the evidence relating to the above three species, but I hope to be able to publish a more extensive analysis of the whole elsewhere.

The volume of accounts in question is the earliest now remaining, and dates from A.D. 1626-7 to 1711-12; entries of rewards for vermin run through the entire volume, varying in number from one or two per annum to as many as two and even six and seven pages. With the exception of a few years between 1644 and 1654 and after 1695, when the items are lumped into a single total payment, they are set out in detail, for the most part under the heads of separate species, though a good many mixed lots occur.

The Kite is first mentioned in the year 1654-5, and between that year and 1675-6 an average of something between two and three per annum were paid for. In the following year there began, as is evident from the sudden rise in the number of entries of all kinds, what may be termed an intensive campaign for the thinning out of vermin, and it becomes at

once evident how exceedingly common the Kite must have been. Prior to this no particular attention seems to have been paid to them, and people appear to have devoted their attention primarily to hedgehogs, foxes, polecats, Crows and Magpies. This effort was kept up for a period of about fourteen years, during the first ten of which no fewer than 380 Kites were paid for, one hundred of them alone being killed in the year 1684-5. In the next two years, although there is no evidence of slackening of the general effort, the number of Kites dropped from thirty-five in 1686-7 to thirteen and two respectively, and thereafter no more than a dozen are included in any one year's accounts. If the same thing was going on to anything like the same extent in other wealden parishes, no large raptorial bird could long withstand the drain on its numbers, and it is easy to understand the above drop, and how the foundation was laid for the final extinction of this bird during the succeeding century.

With regard to the Raven and Buzzard the above remarks also apply, but to a lesser degree. Both species must have perforce belonged almost entirely to a tree-building race, and the numbers recorded do not suggest that either was anything like so common as the Kite. Prior to 1676 only fourteen Ravens and three Buzzards are entered, but during the next fourteen years 198 Ravens and 56 Buzzards were accounted for.

The easiest method of procuring these birds in quantity would naturally be to take them from the nest when partially feathered, and the constant repetition of entries of them in lots of two, three, and four suggests that the majority of them were thus obtained. Except during the first few years of the accounts, none of these vermin entries is dated, but here and there occur items of payments for other matters that are, and so it is sometimes possible to fix approximate dates for the vermin payments. Particularly is this the case for the years 1681-2 and 1682-3; here dated items are well distributed throughout the vermin entries, and it is quite evident that the majority of the Kites, Buzzards and Ravens paid for in those years were killed during the nesting-season. From one or two entries in other years that can be approximately dated in the same way, a similar deduction can be drawn.

There are only two items in the whole book that give direct evidence on this point and they are :—

1629-30.

1tm pd to Wm. Skilton for the heads of 3 yong

Buzzards iiijd.

1681-2 (on some date between April 27th and May 2nd, 1681).
 To John Greenland for 6 Jaye's heads and 2 Kyte's
 eggs 0 0 8

The latter is the only instance of eggs, and the former the only instance of young birds being actually mentioned, while it is also the earliest mention of the Buzzard.

The Raven occurs first in 1641-2, thus :—

Itm to Edward Yong's boye for 4 Raven's heads .. 0 0 4
 and the Kite in 1654-5, thus :—

Itm paid to Thomas Wright and John fflowle for 4
 dozen of Crowe's heads and 6 Kyte's heads 00 01 03
 Itm paid to Thomas Kyte for 20 Crowe's heads and
 fower Kyte's heads 00 00 07

The following entries may be quoted as typical, and did space permit could be extended to many pages :—

1667-8.

Paid to Thomas Jonas for 4 Raven's heads and 1 hedge-
 hogg's head 0 0 4
 To John Drew for 1 dozen of Crowe's heads and for 3
 Kytes 0 0 8

1668-9.

To Richard Kyte for 3 dozen of Crowe's and 2 Jeys, 2
 Hedghoggs, 7 Kytes and 4 Ravens 0 1 9

1680-81.

To Wm. Baker for 16 crowe's heads, 1 hedghogg's
 head, 2 Kyte's heads & 5 Raven's heads 0 1 3
 To John Morphett for 2 Kyte's heads, 4 Woodpeckers &
 8 Crowe's heads 0 0 10
 To Wm. Baker for 4 Kyte's, 1 Pulcat and 4 Raven's
 heads 0 1 2
 To Tho. Curteis for 1 Buzard's head & 6 Crowe's heads 0 0 30b

1681-82 (under date Ap. 27th to May 2nd).

To Edward Caffinch for 2 Kyte's heads 0 0 4
 To John Brooke for 6 Raven's heads 0 0 6

(Under date May 3rd.)

To Francis Holmes for 4 Kyte's heads 0 0 8

(Under date May 4th to 21st.)

To John Greenland for 4 Kyte's heads 0 0 8
 To Joseph Page for 5 Kyte's heads 0 0 10

(Under date June 7th to July 8th.)

To Bryan Pencrasse for 3 Kyte's & 6 Raven's heads 0 1 0
 To Robt. Franklin for 2 Pulcats, 2 doz. of Crowe's
 heads & 6 Kytes 0 1 10

1682-3 (under date Ap. 19th to 30th).

To Reginald Mantell for 2 Buzzard's heads 0 0 4
 To Robt. Mees for 3 Buzzard's heads 0 0 6
 To John Tompkins for 2 Kyte's heads 0 0 4

(Under date May 1st to 26th.)

To Tho. Curteis for 4 Kytes & 1 Sparrowhawke .. 0 0 10
 To Tho. Curteis for 2 Buzzards & 8 Crowe's heads 0 0 6

The following two items are remarkable for the large number of heads that each records. At first sight it would appear that some error had been made, but in each case the price paid does not fit in with the usual tariff for the species mentioned or for any other of the vermin enumerated, and it is clear, I think, that they must have been all quite small young ones taken from the nest, and the reward has been reduced accordingly, as was done in other instances in mammalian items. The first would represent the contents of fifteen to twenty Kite's nests, and the second that of three or four Raven's nests.

1676-7.

ffrancis Peck, for 3 dozen & halfe of Kyte's heads & one								
hedghogg's head	o	1	1

1688-9.

To Tho. Hutton for 16 Raven's heads	o	o	6
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The rewards paid for Kites were very variable from year to year—a penny each being often paid, at other times twopence, though in two instances they were valued at so little as a farthing apiece. Buzzards fetched a penny in 1629 and twopence in 1680 and after; while Ravens were valued at a halfpenny in 1667, three halfpence in 1683, otherwise they were worth a penny each. It may here be noted that the value of a Sparrow-Hawk was invariably twopence, so that there was no inducement on this score for the palming off of the latter's heads as those of its larger companions.

In connection with the facts revealed by these records it must be remembered that at this time the Weald was much more wooded than it is even to-day, and that probably vast acres of practically virgin forest still remained. There had doubtless been a considerable amount of clearing done in the vicinity of the town of Tenterden itself, commensurate with its growth and the increase of cultivation, as well as in its neighbourhood, for charcoal burning, for the supply of timber for its shipbuilding yards at Small Hythe and Reading Street on the near-by estuary of the Rother, and at a greater distance inland for the wealden iron foundries, but the villages and farms throughout the greater part of the Weald were still, for the most part, only isolated clearings in the forest; while roads were few and indifferent, and communication from one to another was effected mainly by forest tracks and bridle paths. There was, therefore, ample harbourage for these numbers of larger birds of prey close up to the town, and still more so in the more sparsely inhabited and denser forest inland.

NOTES

RAVEN NESTING IN SHROPSHIRE.

Two years ago I recorded in *British Birds* (XII., p. 19) that after an interval of thirty-four years the Raven (*Corvus c. corax*) had nested on the exact spot where the last previous nest had been reported. Two out of the four young were murdered, but the other two with the parents are believed to have escaped. The site was a ledge in an old stone quarry. I am pleased to report that in 1920 a Raven has nested and reared three young in a yew tree some two miles from the last place. Each time the nest has been visited only one old Raven was to be seen, apparently the female. What has become of her mate, and whether she is one of the birds from the earlier site, I know not.

H. E. FORREST.

SISKINS IN DEVONSHIRE.

WITH reference to Mr. T. P. Backhouse's note (Vol. XIII., p. 313) I find on looking up my records of the occurrence of the Siskin (*Carduelis spinus*) that I have a similar entry to the one quoted from B. F. Cummings (*Zoologist*, 1906, p. 237) the same date, November 26th, 1905. I had not seen this note, as I did not take the *Zoologist*. I knew Mr. Cummings well, and we must have been in the same locality about the same time, but did not meet. On April 10th, 1915, I saw four Siskins under conditions very like my former observation at the same place.

I might mention that a specimen was sent to me on October 24th, 1894, having been shot in the parish of Dean Prior, south Devon.

J. G. HAMLING.

NUPTIAL DISPLAY OF CORN-BUNTING.

I do not know if the nuptial display of the Corn-Bunting (*E. calandra*) has been described—if not, the following note may be of interest. I was bicycling slowly along on the look out for any bird life, when I saw a bird rise from a clover-layer, about 100 yards off, mount fluttering to some fifty feet and then descend parachute-wise to the top of a holly tree. Settled on the tree it raised its wings to their utmost, and then bending them at the carpal joint slowly waved them, meanwhile fanning out its tail on alternate sides. This it continued to do for just over two minutes, singing all the time, when it suddenly observed me standing

below and hastily dropped back into the clover. What particularly struck me was the exquisite grace of the whole performance, quite unexpected from so comparatively clumsy a bird.

W. B. NICHOLS.

CIRL BUNTING NESTING IN LEICESTERSHIRE.

THE nest of a Cirle Bunting (*Emberiza cirrus*) was found on the outskirts of Melton Mowbray, on May 3rd, 1920. It contained three eggs, a number never exceeded in my somewhat limited experience in this country—half a dozen nests—though according to “the books,” four or five form the normal clutch. But this, I make bold to think, is yet another myth, perpetuated by systematic “cribbing” all down the ages. It was quite by chance I was enabled to make this new record for the county. The boy who found the nest showed acumen beyond his years, so I had the eggs brought for my inspection. A single glance was enough to show that my assumption that they would prove Yellowhammer’s, could no longer be maintained.

H. S. DAVENPORT.

[Mr. A. R. Horwood has recorded a nest and eggs of this species from near Leicester in the *Naturalists’ Journal*, 1896, but we know of no other record.—EDS.]

BLUE-HEADED WAGTAIL IN NORTH LANCASHIRE.

ON May 19th, 1920, Major G. Haines saw, among the Yellow Wagtails on his tennis lawn at Hay Carr, near Lancaster, a fine male specimen of the Blue-headed Wagtail (*Motacilla flava*). He had the bird under observation for some time, and being within four yards of it, saw very plainly the distinctive white chin and superciliary stripe. There is no mention of the species in Mitchell’s *Birds of Lancashire*, and although it is a regular migrant to the coast of north Wales, there is only one other record of the species for Lancashire.

H. W. ROBINSON.

EARLY NESTING OF GREY WAGTAIL.

ON April 24th, 1920, I found a Grey Wagtail’s (*Motacilla c. cinerea*) nest in Surrey containing five nearly fully-fledged young, so that the first egg must have been deposited during the closing days of March.

A pair of Grey Wagtails have to my knowledge nested in the same locality for the past seven years, but I have no previous record of eggs having been laid before the second or third week of April.

HOWARD BENTHAM.

[The date recorded by Mr. Bentham is quite exceptionally

early for England, although in Ireland the normal date for first clutches is early in April, and a set of 5 eggs is recorded on April 1st, 1890 (A. Ellison, *Zool.*, 1890, p. 461). Early dates have, however, been occasionally recorded from England and Wales: thus, young were already hatched in a nest at Meol, Salop, on April 16th, 1904 (*Rep. Caradoc & Severn V. F.C.*, 1904), and young flew from a nest near Aberystwyth, on April 30th, 1902 (J. H. Salter, *Zool.*, 1904, p. 67).—F. C. R. JOURDAIN.]

WALL-CREEPER IN DORSET.

A Wall-Creeper (*Tichodroma muraria*) was seen by Mr. E. P. Gundry, on April 24th, 1920, at Chilfrome, eight miles N.W. of Dorchester. It was remarkably tame, and the observer, who is familiar with our wild birds, got within six feet of it, as it was climbing round an old elm tree, and especially noticed the crimson shoulders and slightly curved long bill. He at once identified the species by referring to Thorburn's *British Birds*, and it is safe to say that at such close range there could have been no mistake. It eventually flew away with another bird, which seemed to come from the other side of the tree and was apparently of the same species. In September 1901 an example was seen some thirty-two miles farther north, in Somerset (*British Birds*, XII., p. 185), and as the species has straggled to N. France and Alderney, I venture to suggest that the Dorset and Somerset examples had arrived by the Channel Islands and Portland route. This is the first record for Dorset. F. L. BLATHWAYT.

LONG-TAILED TITMOUSE BREEDING AT UNUSUAL HEIGHT.

THE caprices of this bird in nest-sites are endless. I have seen a nest twenty feet from the ground in a spruce overhanging a Surrey lane; another near Falmouth about thirty-five or forty feet aloft in the fork of an ash, with no foliage within yards of it; a third, equally exposed and nearly as high, in an oak at Park Place, Henley-on-Thames. The two last nests were in main forks of large trunks, and resembled chance accumulations of lichen, almost invisible from below and only revealed by the parent birds' solicitude. Such sites may be commoner than one supposes. H. M. WALLIS.

WITH reference to Dr. Ticehurst's note (*antea*, p. 18), in March 1907 I watched a pair of Long-tailed Titmice building a nest in the fork of a branch of willow tree about sixty feet above ground. Until the leaves came out this nest

was conspicuous, but afterwards was hidden by the foliage. I have not seen or heard of this bird round Hillsborough, co. Down, since its destruction in the winter of 1916-17, but the Golden-crested Wren (*Regulus r. anglorum*) now appears to have regained its former status. NEVIN H. FOSTER.

[Mr. W. S. Medlicott also writes that he once watched a pair building at the top of an oak in the New Forest at a height which he estimated at fifty feet, and Mr. G. Tickner informs us that he found a nest in Bagley Wood, Berks., in an oak tree quite forty feet from the ground some ten or twelve years ago.—EDS.]

LESSER WHITETHROAT NESTING IN CORNWALL.

ON May 24th, 1920, I found a nest with four eggs of the Lesser Whitethroat (*Sylvia c. curruca*) about three miles from Penzance. The nest was built in a furze bush overgrown with brambles and was about two feet off the ground. It was an exceedingly flimsy structure and without lining. The bird was not seen, but the eggs were quite typical and admitted of no doubt. They were very small specimens but richly marked. This appears to be the first Cornish record of the breeding of the Lesser Whitethroat, which is generally considered to be a rather rare autumnal visitant to the county. A. W. H. HARVEY.

ON THE INCUBATION PERIOD, ETC., OF THE SARDINIAN WARBLER.

As little appears to have been placed on record regarding the nesting of the Sardinian Warbler (*Sylvia m. melanocephala*), the following notes based on observations made at Gibraltar this spring, may prove to be of interest.

- Mar. 25. Nest apparently complete, found in a thick wild olive bush.
- „ 28. One egg laid.
- „ 31. Four eggs. Hen on the nest.
- Apr. 1. Five eggs (all erythristic type). Hen sitting.
- „ 14. One egg hatched. Hen on the nest.
- „ 15. All eggs hatched. Hen on the nest. Incubation period, 13-14 days.
- „ 20. Nestlings. Feather tracts well developed. No down. Inside mouth orange; no tongue spots. Flanges of mouth pale yellow.
- „ 25. Young in the nest.
- „ 26. Nest empty. Hen feeding young at the bottom of the bush. Fledging-period, 11 days.

During the whole of the nesting period the old birds were

quite undemonstrative. On no occasion when flushed from her eggs or young did the hen show any anxiety; on the contrary, she skulked in the olive bush until driven out. The cock was not seen until after the young had flown, when he was seen assisting his mate. On the day the young left the nest, the hen for the first time uttered her alarm-note several times before diving down beside the young. Unfortunately the olive bush was in such a position that it was impossible to observe what share the cock took in the duties of incubation.

J. H. STENHOUSE.

BLACKBIRD'S PECULIAR NESTING-SITE.

IN 1919 a pair of Blackbirds (*Turdus m. merula*) built their nest on the handles of some tools in a tool-box on an allotment, near Edinburgh, entering the box by the hole in the end of it made for the handles of the tools. Five eggs were laid, and five young reared. The old bird was very tame, and was not disturbed by people opening the box or constantly passing it.

IAN MEIKLE.

SWALLOW RINGED IN STIRLINGSHIRE FOUND IN THE TRANSVAAL.

SOME little time ago I heard from several sources that a Swallow (*Hirundo r. rustica*), bearing a *British Birds* ring, had been found at Lake Chrissie, Transvaal, but details were lacking. Major J. W. H. Seppings, however, very kindly interested himself in the matter, and has sent me the following letter from Mr. C. H. Esterhuysen, who found the bird.

Major J. W. H. Seppings,
Cape Town.

P.O. Box 25,
Lake Chrissie.
May 13th, 1920.

Dear Sir,

With regard to your letter dated May 3rd, *re* "migration of birds," I wish to inform you that the Swallow referred to in yours was found on the farm Knockdhu, District Ermelo, Tvl., on the 28th of Jan., 1920. The ringed Swallow was caught alive, the ring taken off, and let off again.

I enclose the ring.

Yours faithfully,
C. H. ESTERHUYSEN.

This Swallow, bearing ring numbered K.R. 87, was ringed as a young bird by Mr. J. Bartholomew, at Torrance, Stirlingshire, on June 27th, 1919.

This is the fifth Swallow ringed in Great Britain under the *British Birds* scheme which has been reported from South Africa.

Major Seppings has very kindly secured a good deal of

publicity for this case in the South African press, and I am hopeful that this may lead to further records being brought to light.

The following table shows at a glance the South African records of Swallows:—

No.	Age.	Ringed.	Date.	Recovered.	Date.	Ringer.	Reporter.
B.830	ad.	Staffs.	6.5.1911	nr. Utrecht, Natal	23.12.1912	J. R. B. Masefield	C. H. Ruddock
E.937	juv.	Ayr-shire	27.7.1912	Reit Vallei, Orange Free State	16.3.1913	R. O. Blyth	A. C. Theron
82620	juv.	Lancs.	3.7.1915	nr. Grahams-town, Cape Province	6.2.1916	F. W. Sherwood	S. G. Amm
J.M.53	juv.	Yorks.	19.8.1918	East Griqualand	21.2.1919	H. W. Robinson	Bishop of Glasgow
K.R.87	juv.	Stirling-shire	27.6.1919	Lake Chrissie, Transvaal	13.5.1920	J. Bartholomew	C. H. Esterhuysen

H. F. WITHERBY.

WRYNECK IN WESTMORLAND.

As the Wryneck (*Jynx t. torquilla*) has been extinct in Westmorland for nearly seventy years, it may be of interest to record that a bird was seen in Dallam Tower Park, Milnthorpe, on April 4th this year. Mr. H. W. Robinson recorded two for N. Lancashire in the *Zoologist* (1908, p. 428), the dates being September and October of that year, and the only other record of recent years for that county is one observed near Burnley on August 30th, 1905.

Eighty to a hundred years ago the Wryneck was quite a common nesting species in south Westmorland, especially in the Witherslack Valley, but thanks to the systematic robbing of the nests by egg-collectors it soon became extinct.

E. U. SAVAGE.

[As the disappearance of this species has been general throughout Lancashire and Lakeland, and was noted seventy years ago, when there was no systematic collecting, it is difficult to see why it should be ascribed to this cause. Probably, as Macpherson suggests, it was always local, and its decrease, like that of the Wood-Lark, seems to be due to natural causes. T. C. Heysham (1791-1857) was probably the only collector in the district in the early part of the nineteenth century.—F. C. R. JOURDAIN.]

INCUBATION OF STORM-PETREL.

IN connection with Mrs. Gordon's most interesting article on the nesting of the Storm-Petrel (*Hydrobates pelagicus*)

(XIII., p. 232), in which she states that on July 2nd about half the birds had laid, in the Inner Hebrides, I might add, that in the Scilly Isles they are much earlier, June 16th generally seeing a number of eggs deposited, whilst in Orkney they are correspondingly later, it being the third week in July or even the last week, before this happens. From Petrels which I had under observation in the Scilly Isles in 1914, I should say that the incubation period is not about thirty-five days, but at the very least forty-two days or even longer. Unfortunately the outbreak of war prevented my observations being concluded.

H. W. ROBINSON.

[From observations made on apparently fresh eggs hatched out in an incubator, Mr. W. Evans found that two eggs were chipped on the 33rd day and one hatched out on the 36th day (*Ibis*, 1902, p. 57-58).—F. C. R. JOURDAIN.]

NESTING OF GREAT CRESTED GREBE IN KENT.

FROM the published records there seems to be no doubt that in England the Great Crested Grebe (*Podiceps c. cristatus*) is still increasing in numbers as a nesting species. This increase is especially noticeable in the Midlands, and I am now able to record that it is increasing in the south, in the county of Kent.

In 1911 they are recorded as nesting on the Lake at Hever by A. Trevor-Battye; this is the first record for Kent as a nesting species; it is said that they have established themselves at Hever and nest there regularly every year, but whether this is so or not I am not able to say.

In 1919 D. H. Meares (*British Birds*, Vol. XIII., page 59) records them as nesting in N. Kent, and as having young on June 2nd.

Also in 1919 someone recorded in the local Kentish papers that it had nested and hatched its eggs at Eastwell Park, the writer asking if it was the first time that this bird had nested in Kent.

That it should nest on the lake at Eastwell Park—if anywhere in Kent—any naturalist would expect.

I am now pleased to be able to record that a pair have nested this year near Maidstone, and had on May 10th, five eggs. As I left the county on that day and have only just returned home, I do not know what has happened to these birds, but there is no reason to suppose that they should not establish themselves on the lake, as the owner is anxious, I believe, to preserve all rare species of birds in the county.

JAMES R. HALE.

[In connection with the above, it may be mentioned that

the Great Crested Grebe appeared on the lake in Eridge Park, which is just across the border in Sussex, a year or two prior to its advent at Hever, and that three pairs were breeding there in 1913. For the knowledge of this I am indebted to Mr. R. Ware.—N.F.T.]

DOTTEREL IN CARNARVONSHIRE.

A PAIR of Dotterel (*Charadrius morinellus*) were observed on the top of Rhiw Mountain, Lleyn Peninsula, on May 10th, 1920, by Lieut.-Col. Alan Gough and a lady, both of whom were on horseback. They behaved with characteristic tameness. Although in my *Vert. Fauna N. Wales* the species is noted as seen occasionally on mountains in the Snowdon district, this appears to be the first occurrence recorded in Lleyn. H. E. FORREST.

GOLDEN ORIOLE IN GLOUCESTERSHIRE.—The Rev. D. F. Horsefield writes to us, that on May 22nd, 1920, a Golden Oriole (*Oriolus o. oriolus*) was seen by a friend of his just outside the city of Gloucester, and from the latter's description and his answers to questions there can be no doubt of its correct identification.

CRESTED TIT REPORTED BREEDING IN SOUTH-WEST INVERNESS-SHIRE.—With reference to the note under this heading in our last number (p. 21), Mr. Matheson writes again (*Field*, April 24th, 1920, p. 570), to state that the fir woods referred to lie on the south side of Loch Garry, are roughly six miles long by one broad, and are part of the old Caledonian Forest. Mr. Matheson also states that in a similar fir wood in Glen Mallie, Loch Arkaig side, the late W. Cameron (game keeper) used to find the Crested Tit nesting between 1889 and 1906, but Mr. Matheson has not visited these fir woods since 1906.

GREAT GREY SHRIKE IN SURREY.—In connection with the record (*antea*, p. 21) of a *Lanius e. excubitor* seen on Ham Common on April 5th, Mr. G. H. Towsey writes that he saw one, no doubt the same bird there on May 15th and 26th, and that it was still there on June 13th. Any date after mid-April is abnormal for this species, though it has occasionally occurred in summer.

GREAT REED-WARBLER IN CO. CORK.—Mr. J. E. Harting records (*Field*, June 12th, 1920, p. 870) that a Great Reed-Warbler (*Acrocephalus arundinaceus*) we assume of the typical race, was sent to him in the flesh from Cosheen, Castle Towns-

hend, co. Cork, where it was picked up dead in a garden by Mr. E. D. Cuming on May 16th, 1920. Although a common bird in many places in western Europe, the Great Reed-Warbler like the Crested Lark, very rarely visits us, and there are only about ten authenticated records of its occurrence in England, and none previously in Ireland.

LITTLE OWLS IN NORTH LINCOLNSHIRE.—With reference to the note "Little Owls in Yorkshire" (*antea*, p. 21), Mr. W. S. Medlicott informs us that *Athene noctua mira* has spread since 1914 throughout north Lincolnshire and now breeds fairly commonly right up to the Humber.

BREEDING-HABITS OF SLAVONIAN GREBE.—In connection with Mr. A. D. DuBois's article (*antea*, p. 2), Mr. R. Plumb writes that he found *Podiceps auritus* nesting some years ago in considerable numbers on Lake Myvatn in Iceland, and that in one instance, at least, the old bird could not be induced to leave her nest, and was just as devoid of fear as Mr. DuBois's bird. The nesting-sites, too, were very similar in character to that shown in the plates.

COMMON SNIPE'S AND LAPWING'S NESTS WITH FIVE EGGS.—The Rev. C. E. Raven informs us that he found a nest of the Common Snipe (*G. g. gallinago*) with five eggs, obviously the product of one hen, at Tuddenham Fen, Cambridge, on May 14th, 1920; and Mr. A. Steven Corbet writes that he found a Lapwing's (*V. vanellus*) nest with five eggs at Theale, near Reading, on May 19th. In this case the eggs were also like one another in markings and at the same stage of incubation, so that they were also probably the product of a single hen. Similar occurrences in these species and other *Limicolæ* will be found referred to in Vol. II., p. 136, Vol. IX., pp. 28 and 50, and Vol. XII., p. 44.

COMMON CRANE IN KIRKCUDBRIGHT.—The Duchess of Bedford writes that she saw a Common Crane (*Megalornis g. grus*) at no great distance on the Moor at Cairnsmore, on June 13th, 1920. The bird was full winged and apparently wild. The Duchess will be glad to know if any keepers of captive Cranes have lost any recently.

CAROLINA CRAKE IN CO. GALWAY.—Prof. C. J. Patten records (*Irish Nat.*, 1920, p. 59) that at 3 a.m. on April 11th, 1920, a Carolina Crake (*Porzana carolina*) struck the lantern of Slyne Head Lighthouse, and fell dead. Prof. Patten, who was at the Lighthouse at the time, found the bird to be an adult male in summer plumage.

Previous examples of this American Crake have been taken in Berkshire, near Cardiff, Tiree, Inner Hebrides, and Lewis, Outer Hebrides, while one obtained about one hundred miles to the west of Ireland was recently recorded in our pages (Vol. XIII., p. 298), by Mr. C. Borrer.

REVIEW.

The Birds of the British Isles and their Eggs. By T. A. Coward, F.Z.S., etc. First Series. pp. 376. 242 col. illustrations and 65 photographs. $6\frac{1}{2} \times 4\frac{1}{2}$ in. Warne. 1919. 12s. 6d. net.

ONE is often asked to recommend a book on British birds suitable for beginners, which while simply written, shall not be unscientific, and containing a recognizable coloured figure of every bird likely to be met with in the British Isles, at a reasonable price. No serious attempt has been made hitherto to meet this demand. The great works of Gould, Dresser and Lilford were issued at prices which were and are still prohibitive, at any rate for beginners, and none of the smaller handbooks contained really good coloured plates. The late Rev. C. A. John's *British Birds in their Haunts* and Hudson's *British Birds* contained excellent little black and white figures of most of our birds, but the letterpress of both is now somewhat out of date, and the larger works edited by A. G. Butler and F. B. Kirkman appealed to a different class of readers. The book now before us comprises the whole of the Passeres and other orders up to and including the Pelecaniformes, so that another similar volume should complete the work.

The first glance shows that the coloured plates are a strong feature of the book. They are three-colour reproductions on a much reduced scale of those which have been long admired in Lilford's *Coloured Figures*. They naturally lose somewhat in reproduction; a certain dullness is inevitable, and the reduction is in some cases disproportionate. For example, Thorburn's figure of Tengmalm's Owl appears as a full page plate, while all the other Owls are reduced to half page size. It would have been better to have chosen one of the largest species for the full page plate, and to have given Tengmalm's Owl on a smaller scale. Of the photographic illustrations we cannot speak so highly, and we think several of them unworthy to appear in a work of this kind. The figures of eggs are reproduced from Hewitson's well-known work and are less successful than those of the birds, some being quite unrecognizable. Few oologists would be able to assign names to the figures of the eggs of Crested and Bearded Tit (pl. 58) or the Grasshopper-Warbler (pl. 65), Wood-Lark and Cirl Bunting (pl. 41), while the eggs of the Wheatear and Dipper are represented as similar in colouring (pl. 84). Apparently the names of Hobby and Kestrel have been transposed on pl. 158, while the "Turtle" (pl. 34) represents a bird unknown to us, unless the name is a misprint for Twite.

The nomenclature follows the B.O.U. list of 1912, but Mr. Coward is evidently in touch with current literature and includes several brief references to species added since that date. The articles on birds are workmanlike, and show a sound knowledge of our British birds. Foreign visitors are wisely treated briefly, and little space is devoted to descriptions of plumage and practically none to geographical distribution.

The British status is also given in a condensed form, and the bulk of each notice consists of notes on the habits and life-history as observed in this country. Being for the most part based on personal observation, imperfections naturally crop up here and there, and they must be taken as representing the experience of one who has spent a lifetime in the study of birds in the field rather than the sum of our present knowledge of each species. The statement that the Cormorant lays three or four eggs late in April or May does not alter the fact that clutches of five are not uncommon and that sixes have occurred. The present writer is not responsible for the statement that in the field the Nutcracker "is not unlike a Rook with a long bill"; while the *shape* is corvine, the colouring is quite distinctive, and the white tail margin catches the eye at once. We should hesitate to describe the Snowy Owl as "dimorphic" because some specimens are white, while others are strongly barred with brown. Harriers are, as Mr. Coward rightly says, variable birds, but in some cases the head of the male certainly does look white, as the bird sails by.

In discussing the claim of the Belted Kingfisher to a place on the British List, Mr. Coward seems to think that the evidence afforded by two occurrences in Ireland was deemed insufficient and for this reason the bird was not given a place. It was in reality because it was known that both supposed occurrences were due to fraud.

These, however, are comparatively trifling matters; the fact remains that here for the first time we have a series of small, but on the whole excellent, coloured figures of practically all the birds on the British List (with the exception of a few of the rarest stragglers) by Keulemans and Thorburn, together with passable figures of typical eggs, in combination with practical and sound letterpress by a field worker, in a compact form and issued at a reasonable price; and we shall look forward with interest to the completion of the work.

F. C. R. JOURDAIN.

LETTER.

PROBABLE LITTLE BUSTARD IN NORTHUMBERLAND.

To the Editors of BRITISH BIRDS.

SIRS,—On Holy Island on April 24th, 1920, I had an excellent view of a bird quite new to me, and which I should say was certainly a Bustard, but I am not familiar with this bird. It was on a field of growing oats, and crouched when observed, looking up frightened. Its long neck was held well up all the while. I should say its neck and breast were pale cinereous coloured, but I could not see the back well. On taking wing, its white wings (though not pure white) were conspicuous. They were flapped rapidly and held pendulously, reminding me of the flight of a Long-tailed Duck. The flight was not powerful, but fairly rapid. In size I should say the bird was decidedly smaller and lighter than a hen Caper. What do you think it was?

SETON GORDON.

BAMBURGH, NORTHUMBERLAND, May 4th, 1920.

[The white on the wings and the description of the flight, which is very characteristic, taken in conjunction with the other details, make it almost certain that the bird was a Little Bustard (*Otis tetrax*).—EDS.]

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CONTRIBUTORS—

E. HARTERT, PH.D., M.B.O.U., F.Z.S. ANNIE C. JACKSON, H.M.B.O.U.
REV. F. C. R. JOURDAIN, M.A., M.B.O.U. C. OLDHAM, F.Z.S., M.B.O.U.
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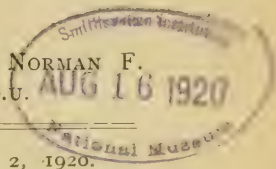
BRITISH BIRDS

WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

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ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., AND NORMAN F.
TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.



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BIRD TRACKS IN THE SNOW.

BY

RICHARD CLAPHAM.

THE study of wild-life footprints is a branch of natural history work that has received far less attention than it deserves. A great deal can be learnt of the habits of furred and feathered creatures by following their tracks and trails in snow or soft ground. Animal tracks, of course, afford more scope for study than those of birds, inasmuch as the former never leave the ground except to climb, whereas birds make use of their wings, and many of them spend but brief portions of their existence on *terra firma*. Wildfowl, waders, and game birds spend much more of their time on the ground than birds of prey, or song birds, and one can, therefore, learn a good deal about them by studying their footprints.

Although an experienced tracker can differentiate at once between the tracks of all our British mammals, bird tracks present a more difficult proposition. Many of our smaller birds leave footprints which are so alike in size and distance between imprints, that it is often impossible to decide on the particular bird from the tracks alone. The same thing applies to a less extent in the case of wildfowl and waders, and only by careful measurement of individual tracks can one make sure of the author of the footmarks. Ducks, waders, and small birds exhibit no great difference in shape of footprints, although they differ considerably in size, but in the case of the game birds, their tracks possess individual characteristics. The surroundings, too, in which tracks are found, generally afford a clue to the identity of the makers. In the space of one brief article, it is impossible to do more than touch on the tracks of either animals or birds, but possibly a few notes concerning the footprints of the latter, may prove of interest.

The track of a Pheasant is easily recognized from the very straight imprint of the centre toe, and the fact that the tracks are very close to an imaginary centre line, one footprint being almost directly behind the other. The average stride of a cock Pheasant walking is from 9 inches to $9\frac{1}{2}$ inches, and from 20 inches to 21 inches running. The stride of a Grouse walking is from 5 inches to 6 inches, depending on the depth of snow; while that of a Blackcock averages 7 inches from centre to centre of footprints.

Before going further, it may be as well to state under what conditions the tracks can be most easily studied. Winter is the best time of year to study the majority of tracks, for clean, white snow, if not too deep or hard, affords a splendid background on which to decipher the hieroglyphics left by the feet of nature's wild things.

Thin, damp snow, over a hard, smooth surface, such as a road, affords the best field for track study, as then each imprint is clear cut, and there is plenty of contrast between



FOOTPRINT OF PHEASANT.

(*Photographed by R. Clapham.*)

the impressions. If it is desired to photograph the tracks or make diagrams of them, the above conditions, coupled with an early morning or evening light, will be found ideal, as shadows will be cast on one side of the tracks, and they show up well. Deep snow, while showing the trail plainly enough, blurs the individual tracks, and hides their characteristics; whilst frozen or crusted snow shows little more than the claw marks. Occasionally deep snow reveals the identity of the track-maker more easily than thin, soft snow. For instance, the tracks of a Magpie can be mistaken for those of other birds; but if one finds in the snow the plain impression of

each feather in the bird's spread tail, at the spot where it alighted, there is no chance of making a mistake. The same thing applies to the Pheasant, though a sure guide to the tracks of this game bird is the very straight middle toe previously mentioned. Birds use their wings to aid them in walking in deep snow, and they leave the impression of the wing-feathers both when alighting, and on rising from the ground. These "wing stretches" as we may term them, if clear cut, afford from their shape a clue to the track-maker's identity.



GROUSE TRACKS.

(*Photographed by R. Clapham.*)

To secure more contrast for purposes of photography, it is possible to fill the footprints with fine sand or other material dyed black, but under ideal conditions—*i.e.*, thin, damp snow over a hard, smooth surface—fine detail in individual tracks is lost by so doing. In addition to leaving footmarks, ground roosting birds, such as the Grouse, leave very distinct impressions of their roosting places. These, in the case of a covey of Grouse, are not close together, but scattered about at short distances from each other, the individuals composing the covey being in touch in case of danger.

The tracks of birds possess various characteristics of their own. The track of the Woodcock is remarkable for its neat appearance. Once you recognize the footprints of a "cock," you will never mistake them for those of any other bird.



TRACKS OF BLACKCOCK.

(*Photographed by R. Clapham.*)

Heron tracks are easily distinguished by their size, and the same thing applies to the tracks of Geese or Swans.

Although, as already stated, the majority of birds spend less time on the ground than animals, and do not travel over such wide areas on foot, their tracks afford much information as to their feeding habits and general behaviour.

It is extremely useful to both sportsman and naturalist to be able to recognize at a glance the tracks of birds and beasts which they encounter in their rambles afield. During the daylight hours, tracks are often the only source of information as to the presence of certain species in a district. Once the tracks are recognized, arrangements can then usually be



IMPRESSION OF A MAGPIE'S TAIL-FEATHERS, AT THE SPOT
WHERE THE BIRD ALIGHTED IN THE SNOW.

(Photographed by R. Clapham.)

made to interview the bird or beast from a suitably concealed vantage point.

The ignorance which I have seen displayed concerning wild-life tracks, even by people who have been brought up in the country, is amazing. It is not at all uncommon to find folks following rabbit tracks in snow, backwards, under the impression that the small imprints of the forefeet are

placed ahead of the larger hind feet tracks, whereas in reality the exact reverse is the case.

With both bird and animal tracks, the anatomy of the creatures which make them has everything to do with the shape and position of the individual tracks in the trail. An imaginary straight line is an excellent guide when studying a trail or line of tracks, for certain creatures place their feet much closer to this line than others.

A wounded beast shows certain deviations from its natural



FOOTPRINTS AND "WING STRETCHES" OF CARRION-CROW.

(Photographed by R. Clapham.)

procedure, and a study of the creature's footprints will often afford valuable information as to how badly the animal is hurt, and in what portion of its anatomy the wound is.

As already mentioned, it is impossible to do more than touch extremely lightly on this interesting subject in the space of a single article. Tracks and tracking are, at any rate in this country, a subject which still affords a wide field to the naturalist-photographer, for as yet little or nothing has been written concerning the footprints of our British animals and birds.

NOTES ON A PAIR OF BEE-EATERS IN SCOTLAND.

BY

J. KIRKE NASH, L.D.S.Ed.

DURING the early days of June 1920 Mr. David Hamilton and the writer enjoyed the unique experience of keeping a pair of Bee-eaters (*Merops apiaster*) under daily observation for nearly a fortnight.

The birds were first observed by Mr. Hamilton on the 3rd of the month, as they perched on a wire fence surmounting a small sand bank on a picturesque stretch of the River Esk, near Musselburgh, Midlothian.

The weather was dull at the time, with a misty atmosphere which somewhat hindered clear observation, but the peculiar form of the birds, with their green breasts and chestnut backs, was sufficiently evident to assure the observer that he had two rather unusual strangers before him. He did not remain long in doubt, however, as one of them suddenly flew almost to the spot where he stood beneath some willows, and captured a large bee within a few yards of him. The insect was somewhat above the bird, which rose almost perpendicularly to seize it, and in doing so its tail with the characteristic elongated central feathers was spread out like a fan, the various colour patches also being clearly exhibited.

Pressure of time prevented further observation on that day, but on being informed of their presence I visited the spot early the next morning and had the great pleasure of seeing both birds perched on the fence as when first observed. A raw east wind was blowing and as they faced it, and incidentally the spectator, they gave one the impression of sitting very close down, so that, when viewed from the opposite bank of the river, where a much-frequented footpath ran, they presented a very small front to the onlooker. This peculiar attitude we feel sure, saved the situation on many occasions. Possibly the east wind which prevailed here nearly all the month of June caused the birds to assume it.

On looking at a coloured plate of this species one would naturally conclude that its brilliant colours would bring it conspicuously before the notice of the most casual observer, but our experience proved that so long as the birds remained in the position described they attracted little attention, as the green breast harmonized so completely with the surrounding herbage, whereas the dark forms of the numerous Starlings,

searching for food on a meadow in the background, stood out in clear relief.

Viewed through glasses the birds were a perfect revelation. The chestnut head and upper-back merging into tawny-yellow or primrose on the lower-back; the white frontal patch; the black band passing across the eye to the ear-coverts; the orange-yellow throat divided by the crescentic black line from the bluish-green or greenish-blue under-parts—in certain lights the green distinctly predominated—and the dark green tail with the elongated central feathers—a feature seen in no other bird on the British List—all attracted our attention. Every now and then the birds made short flights in pursuit of some insect, returning each time to the fence after the manner of a Flycatcher. Twice on the first occasion I saw them I noticed each bird with a large bee in its possession. After repeatedly knocking it on the fence and moving it about in its bill it suddenly swallowed the insect whole. During the succeeding days we frequently saw this act performed.

At intervals the birds mounted high into the air making rapid circling flights with an airy undulating motion—soaring at times and exhibiting a grace of action seldom seen in any of our native birds. Frequently as they rose into the air the beautiful tail assumed the fan shape.

Keeping them under observation for several hours daily, we have no hesitation in saying that the Bee-eaters intended nesting, as we independently discovered on the 7th that they were frequenting a special hole in the sand bank and within three hours one afternoon in bright sunshine I counted fifteen visits, most of them being paid by the hen bird, which on some occasions remained within for about ten minutes. At times both birds were in together. Although we did not see the birds commence to excavate the shaft we have little doubt they made it, as we could see a small pile of dry sand beneath it. Even the attitude of the birds as they sat together on the fence indicated a domestic interest, and on one occasion Mr. Hamilton saw the male bird present his mate with a large bee. We were further confirmed in our belief by the fact that from the time we observed them at the hole referred to they never approached any other of the numerous holes in the bank.

They displayed great excitement as they neared it, giving utterance to their peculiar liquid notes, which are described as sounding like "quilt"—a poor representation in our opinion, as a liquid "r" undoubtedly enters into its

composition. The sound somehow reminded one of a clucking note of the Blackbird (*T. merula*) blended with a certain trill of the Ringed Plover (*Ch. hiaticula*). Before alighting they hovered with fluttering outspread wings, and, with so many passers-by, at these moments we experienced considerable anxiety, as this action made them very conspicuous, their backs shining in the bright sunshine like burnished gold, although when they actually settled the effect was quite reversed, as the colour of their backs blended beautifully with the sand. Also when the birds left the hole they were difficult to detect, as they shot out like an arrow high into the air. Watching the proceedings of the birds day by day we realized that we were the privileged observers of a great ornithological event, as this was the first occasion, so far as we knew, on which these rare visitors would almost assuredly nest in the British Isles.

To obtain even a glimpse of a Bee-eater in this country would be an event forming a red-letter day in the life of any British ornithologist, but to see a pair of these birds for hours daily, making long flights or perching within fifty yards of where we stood, and every now and then darting after their insect prey or paying visits to the apparent nesting-site was a pleasure which we feel sure the most ambitious ornithologist could never have hoped to enjoy.

All appeared to go well until the 12th of the month, when the male bird alone was in evidence, and we somehow got the impression that it was more wary. Had the female actually commenced to incubate the eggs? was the thought that came to us. The 13th passed without our paying a visit, and on the following day we only saw the male for a short interval. Visiting the spot early on the 15th we found it perched on the now familiar site, but it made off when we attempted to make a near approach, and we little thought at the moment that this would form our last view of these beautiful birds. Later on in the day we heard the sad news that the female had been captured on the 13th by a local gardener.

It was put into a greenhouse, supplied with bread-crumbs, and died, we understand, within two days, though before doing so it laid an egg, which, unfortunately, was broken and lost.

The sad climax of this little drama in bird life was reached in the course of another few days through the unfortunate survivor being caught and entirely destroyed by a cat near the spot where the hen-bird came to its untimely end.

SOME NOTES FROM THE SCILLY ISLES.

BY

W. E. GLEGG.

DURING a visit to the Scilly Isles in June 1920 I made some observations with regard to the Manx Shearwater (*Puffinus p. puffinus*) and one or two other local species, besides many on the commoner ones. On June 8th I heard a Grasshopper-Warbler (*Locustella n. naevia*) singing in some very thick cover surrounding a small pond in the centre of St. Mary's, and listened to its intermittent reeling for over an hour. On the same day I put a pair of Turtle-Doves (*Streptopelia t. turtur*) out of some bushes outside Hugh Town, St. Mary's, and a few days later heard the note from the same cover where the Grasshopper-Warbler had been seen. Single Gannets (*Sula bassana*) were seen off the coast in the neighbourhood of St. Mary's on June 10th, 11th and 16th.

The night of June 14th/15th was spent on Annet with the object of watching the nocturnal movements of the Shearwaters, and as my observations differ somewhat from, and may be considered supplementary to, those of Dr. Norman H. Joy (Vol. VI., p. 118) and those of Mr. C. J. King as published in *Country Life* (February 2nd, 1907), I will give them in detail.

Judging by the remains of those which had fallen victims to the Gulls, the Shearwaters nest all over the island, excepting perhaps on the narrow neck. I was advised, however, that the main part of the colony was situated on the south-eastern portion of the islet, so I took up my position there. At 11.30 p.m. I had experienced nothing, and I feared my lonely vigil was to be in vain. However, from this time until 11.45 I saw occasional dark forms flying past me; their numbers gradually increased, and by midnight the sport was at its height, the air being full of flying birds. On several occasions they flew straight into my face, striking me heavily, and one bird fell to the ground stunned by the impact. Realizing that I was exposed to some danger, I decided to lie down, and this probably increased the interest of my experiences. The curious crowing note of the birds formed an incessant din, and there seemed to be much quarrelling. While two were indulging in a serious scrap, I put out my hand and caught one of the combatants. Birds were all around and quite close to me. Some were very bold, and actually came on to my shoulder. I played with some of them, and they

showed no sign of fear, simply biting my finger. Although the darkness rendered the operation somewhat difficult, I ringed three of these bolder spirits. A somewhat interesting point arises out of this ringing, for at least one of the ringed birds returned to my shoulder after some considerable lapse of time, which tends to show that these nocturnal movements have some other significance than a mere departure or return to the breeding-ground.

By 3 a.m. they had ceased to fly about, but one or two could still be seen on the ground, and by 3.30 a.m. even these had disappeared.

In view of the theory that has been put forward to explain the nocturnal movements of the Shearwater, I must state that the activities of the birds seemed to be controlled by the light. The numbers of the birds decreased as the light increased.

It is perhaps worth mentioning that no Gulls were about when the Shearwaters came out, and they did not appear again until about 3 a.m.

The fact of the birds striking me is puzzling. At first I thought this might be caused by the light from the Bishop Rock Lighthouse, but my later experiences caused me to abandon this idea.

NOTES

SISKINS IN DEVON.

WITH regard to the interesting notes on the Siskin (*Carduelis spinus*) in Devon (Vol. XIII., p. 313, and Vol. XIV., p. 38), I might perhaps mention that I have notes of a female seen between Budleigh Salterton and Exmouth on December 18th, 1916; of two birds observed by a friend at Exmouth at the end of December 1919; and of a fine male on the Otter estuary on April 3rd, 1920. This last bird was in full breeding plumage, and picked up seeds quite unconcernedly within a couple of yards while I watched it. Presently it flew up to a bush close by, and burst into song—a low, sweet warble, varied by a periodic indrawing of breath, resulting in a curious note rather like the “tweee” of a Greenfinch on a small scale.

W. WALMESLEY WHITE.

NUMBER OF EGGS IN CLUTCH OF TREE-SPARROW.

DURING the last two or three years the Tree-Sparrow (*Passer m. montanus*) appeared at Rosehill, Cheadle, Staffordshire, in diminished numbers, but this year (1920) it has once again taken possession of all my available nesting-boxes. The eggs have generally been the normal number of five or six, but this year in one nest seven young ones were successfully reared, and they flew a few days ago. I have never before found so large a number in one clutch.

In one clutch of six all the eggs were of a uniform light greenish-cream colour mottled thickly with grey, which is very unusual here, as most clutches contain only one light egg.

J. R. B. MASEFIELD.

[The clutch of the Tree-Sparrow seldom exceeds six, but Mr. A. H. Williams took a nest at Kingsland, Herefordshire, which contained the quite exceptional number of eight eggs.—F.C.R.J.]

SHORE-LARKS IN SUSSEX.

ONE of the least regular of autumn and winter visitors to the coast of Sussex, the Shore-Lark (*Eremophila a. flava*), occurred in unusual numbers during the past winter. Two were shot at Rye Harbour on October 25th and four more on November 17th, 1919. On the same day two others were obtained at Winchelsea, where a male was also killed on February 2nd, 1920. On March 27th two more were procured at Rye Harbour and two at Pevensey, while others were seen at Cooden,

between the latter place and Bexhill. I note that Mr. A. R. Leslie Melville has recorded (*Field*, May 15th, 1920, p. 692) one, that he saw on the Downs at Hove in the third week of April. The last one that I heard of prior to the above was seen at Rye Harbour by the Hon. Mrs. Parker on January 30th, 1917. N. F. TICEHURST.

EARLY NESTING OF GREY WAGTAIL.

REFERRING to the notes on the above subject (*antea*, pp. 39, 40), I should like to state that I found a nest with five eggs at Shepton Mallet, Somerset, on March 31st, 1910. Here this species is common, and the latter half of April and early May is the general nesting-time, although full sets can often be found during the first week of April. STANLEY LEWIS.

HOOPOE IN SHROPSHIRE.

A HOOPOE (*Upupa e. epops*) was seen by several people at Ellesmere about the end of April 1920. Another was shot there April 13th, 1912. Most of those recorded in Shropshire have been in the spring or early summer, but one was obtained at Claverley, Bridgnorth, in November 1895.

H. E. FORREST.

GREAT SPOTTED WOODPECKER IN ARGYLL.

WITH reference to Mr. Charles Kirk's note (*Scot. Nat.*, 1919, p. 185) and your short note thereon (Vol. XIII., p. 299), I am able to add the following facts through having stayed the whole of June and latter half of September 1919, and the whole of June 1920 in the St. Catherine's district of Loch Fyne. Immediately after our arrival my wife and I had our attention drawn to a curious hammering noise repeatedly heard. By walking on the grass margin of the roads we were soon able to see these very interesting birds (*Dryobates major* subsp.?) very frequently at close quarters.

On a stretch of about five miles on the St. Catherine's side of the Loch I formed the opinion that there were probably two or three pairs, but although we looked very diligently for signs of nesting we saw none. Their work on rotten branches was very evident, however.

On the Inverary side there was also evidence of their presence, and in one place they seemed to have made some attempt to excavate a nest hole in the trunk of a dead beech, but as it was about 20 feet from the ground I was not able to examine it as to depth. Although the work seemed quite recent, no birds were ever observed near it.

In late September one or two of these birds were still to be seen on the St. Catherine's side.

Now comes the disappointing part, in that we have spent the whole of June this year—an ideal month of dry weather for getting everywhere about the woods—and have neither seen nor heard a single Woodpecker on either side of the Loch. At one part only on the St. Catherine's side there were fairly recent marks on two rotten branches, but the bird had apparently passed on.

It does seem a little strange that the 1919 visitation should have been so sporadic. Might not the great pest of caterpillars in May and June 1919 have something to do with it?

W. STEWART.

[Major J. H. P. Leschallas records (*Scot. Nat.*, 1920, p. 93) that he has seen the Great Spotted Woodpecker several times "this spring" in Glenfinart, which is on Loch Long, 12 miles or so south of St. Catherine's. The bird recorded by Mr. Kirk was at Minard, also about 12 miles from St. Catherine's, but to the south-west on the opposite side of Loch Fyne. The species, therefore, seems to be spreading over a considerable area in this district.—Eds.]

HOBBY IN SHROPSHIRE AND YORKSHIRE.

ON May 20th, 1920, Dr. Buckle and I had the pleasure of watching a pair of Hobbies (*Falco s. subbuteo*) for over a quarter of an hour at Middletown, on the Welsh border of Shropshire. It was a brilliant day, and with the aid of binoculars we were able to ascertain the species beyond a doubt. I saw the birds also on two subsequent occasions, once at the same place and once about four miles off. The Hobby has nested repeatedly in the Ludlow district, but this is the first time I have known a pair to occur in early summer near Shrewsbury.

H. E. FORREST.

It may be of sufficient interest to record that I saw a Hobby near Goathland, Yorkshire, on May 16th, 1920. I have never seen one in Yorkshire before, and believe they are rare so far north. It was, I expect, on migration, as it was flying very fast and straight, and I watched it with glasses for about two miles; its direction was for Whitby. It passed ten yards from me and kept about ten feet from the ground, against a strong east wind.

W. S. MEDLICOTT.

TURTLE-DOVE NESTING ON THE GROUND.

ON May 31st at Fulbourne, near Cambridge, I found a Turtle-Dove (*Streptopelia t. turtur*) nesting on the ground. The

nest was well hidden in rough grass about four feet from the base of a large and thick hawthorn bush. The birds had made no pretence of building a proper nest, but had merely lined a small hollow very sparingly with fine roots, dead grass, and one or two dead leaves.

The bird sat very tight, although the eggs were almost fresh, allowing me to crawl right underneath the bush before she got off.

I could see no possible explanation of this extraordinary



TURTLE-DOVE'S NEST. ON THE GROUND.
Fulbourne, Cambs., May 31st, 1920.
(Photographed by H. G. Le Ray.)

choice of situation, as the bush was one of a large number of similar bushes thickly scattered over several acres of ground, in which I found another Turtle-Dove and two Ring-Doves (*Columba p. palumbus*) all nesting in normal positions.

Whether she successfully reared any young or not I cannot say, as I was unable to visit the place again.

FRANCIS J. L. MITCHELL.

BLACK-TAILED GODWITS INLAND IN LANCASHIRE.
ON June 1st, 1920, I put up a party of nine immature Black-tailed Godwits (*Limosa limosa*) from a swampy field on Martin Mere (near Southport), some four miles inland. They remained

in the air for minutes together, and were by no means wary. Eventually they alighted, but I saw them on the wing on several occasions later in the evening. On the previous day Mr. H. Caunce had observed three Godwits in the same locality, but being only acquainted with the Bar-tailed species, he was puzzled by their tails and prominent wing bars.

F. W. HOLDER.

DISAPPEARANCE OF NESTING SPECIES IN THE SCILLY ISLES.

It is never a pleasant duty to record the disappearance of a nesting species from any locality, especially from such a bird paradise as the Scilly Islands, but the fact remains that certain species have gone, and that others from no apparent reason are following them into oblivion. The most marked case is that of the Kittiwakes (*Rissa t. tridactyla*) which used to nest in large numbers in the western group of islands off Menavawr. In the early 'fifties they left this island for that of Gorregan, where they remained in full force until the early 'seventies. Since then they have gradually disappeared, until in 1900 there were only three nests, these being the last of the Kittiwakes known to have nested in the Scilly Isles.

The Roseate Tern (*Sterna d. dougallii*) was nesting in fair numbers in Scilly up to the early 'forties, but only a few pairs were there in 1854 and it was last seen about 1867. The same may be said of the Sandwich Tern (*S. s. sandvicensis*), which began to disappear about 1886, and has now completely left the islands as a nesting species, a single nest only having been found in 1903—the last on record. On May 23rd, 1911, I saw four on White Island in the eastern group; they were certainly not nesting, but in all probability, judging by their flight, on passage. I also saw a pair fishing in Old Town Bay on May 18th, 1914.

The Arctic Tern (*S. paradisæa*) has also disappeared, and the Common Tern (*S. hirundo*), which took its place, is also becoming scarcer every year as a breeding species. In 1911 they were fairly plentiful, but in 1914 the only nests I found were on Guthers, where there were perhaps twenty or thirty pairs nesting, but not a full clutch among them. The Common Tern is a peculiar bird, however, and deserts a place for no apparent reason for a year, or period of years (as I found at Ravenglass, in Cumberland), generally returning sooner or later: the same thing applies to the Sandwich Tern, as I also found at Walney Island, in Lancashire, so we may yet

hope to see both species again fully established in the Isles of Scilly.

The Common Guillemots (*Uria t. troille*) are also going, thanks to the destruction of their eggs by the big Gulls. In the eastern group, a few pairs nest on Menewethen, but it is almost confined to the islands of Gorregan and Roseven, in the western group. This species used to nest in large numbers in Scilly, but is becoming scarcer every year. Even in 1911 it still maintained fair numbers, but in 1914 had become very scarce indeed. Very few of the eggs hatch out, for exposed as they usually are in the open, unlike those of many of the other species, they are broken and eaten wholesale by the big Gulls as soon as deposited.

On Roseven in 1914 these Gulls broke eggs deliberately not five yards from where I was standing, so much so, that I immediately left the island in the hope that the owners would sit down and protect those that remained. Herring-Gulls (*Larus a. argentatus*) were the worse culprits. I did not land on Gorregan, fearing that the same thing might happen, but as I sailed past, the glasses failed to show a single Guillemot on its ledges.

The Peregrine Falcons (*Falco p. peregrinus*) have deserted the eastern group, thanks to human egg-destroyers, but thanks also to constant watching, manage to survive in the west. In 1914 the pair of birds were both young, and the nestlings very undersized; moreover, the cyrie was so situated that there was a strong up-draught. On top of all this, came a night of intense cold during which the unfortunate brood perished.

H. W. ROBINSON.

GUILLEMOT IN STAFFORDSHIRE.

A COMMON GUILLEMOT (*Uria t. troille*) was picked up alive, but injured, underneath telegraph wires near Stone, Staffordshire, on May 19th, 1920, and it afterwards died. On dissection it proved to be an adult male, and was in full nuptial plumage. This makes the third authenticated record of the occurrence of the Guillemot in this county. Previous records are: June 28th, 1889, and June 1901, both recorded from Gailey Pools, per Mr. W. Leonard Ward (see *North Staffs. Field Club Transactions*, Vol. XL., pp. 49 and 52, 1905-6).

B. BRYAN.

JAYS AND WOODCOCKS IN HOLLAND.—Referring to his Norfolk Report for 1919 (Vol. XIII., p. 250), Mr. J. H. Gurney writes that he has heard from Baron Snouckaert, of Doorn, that Jays (*Garrulus g. glandarius*) and Woodcocks (*Scolopax*

rusticola) were just as plentiful in Holland as in East Anglia, "the former were in vast numbers, but no one has been able to give an explanation of their abundance." Baron Snouckaert had also received a Great Bustard (*Otis t. tarda*) and had heard of four or five Nutcrackers (*Nucifraga caryocatactes*), while a Red-breasted Goose (*Branta ruficollis*) was killed on December 3rd.

SHORE-LARKS IN NORFOLK.—Mr. J. Mansfield says (*Field*, May 15th, 1920, p. 692) that he saw on May 2nd, at Sheringham, four birds which, after consulting various books, he came to the conclusion were Shore-Larks (*Eremophila a. flava*). If the identification was correct, this is a late date for the occurrence of this species.

PIED FLYCATCHER ON ACHILL ISLAND.—The editor of the *Field* states (May 22nd, 1920, p. 729) that he is informed by Mr. E. Gerrard, taxidermist, that he has received for preservation a Pied Flycatcher (*Muscicapa hypoleuca*) from Mr. Sheridan, of Achill, co. Mayo. The bird is stated to have been obtained at Achill on or about May 9th, 1920. There are fourteen previous occurrences of the bird in Ireland.

SUPPOSED CUCKOO'S EGGS IN SANDPIPER'S NEST.—Mr. T. G. Laidlaw (*Scott. Nat.*, 1920, p. 70) says that a friend of his, while fishing a tributary of the River Dye on May 28th, 1919, found the nest of a Sandpiper (*Tringa hypoleuca*) with four typical eggs, and also two smaller greyish speckled eggs which he recognized as those of the Cuckoo. The eggs, however, were not taken, so that we have no evidence beyond the opinion of the finder, whose name is not given, that the eggs were correctly identified.

GREENLAND FALCON OFF CO. DUBLIN.—Mr. G. C. May quotes letters (*Irish Nat.*, 1920, p. 60) from Mr. F. Mason showing that a bird, which, from the description given, was evidently a *Falco r. candicans*, was captured on Lambay Island on May 5th, 1920, after it had gorged itself with a cock Pheasant. The bird was seen on the island on May 3rd.

BUFFEL-HEADED DUCK IN SCILLY.—At the June meeting of the British Ornithologists' Club Dr. H. Langton stated that a female *Bucephala albeola* had been shot by Miss Dorrien Smith on Great Pool, Tresco, on January 17th, 1920. The bird was in the company of some Teal (*Bull. B.O.C.*, XL., p. 155). There are only two previous authenticated records of the occurrence of this duck in the British Isles many years ago. It is an inhabitant of North America.

"CALCARS."—A SUGGESTION.—In the transcription given by Mr. Mullens (Vol. XIII., pp. 13-20) of the sixteenth century black letter pamphlet containing the earliest known figure to the Ruff there occurs, on p. 18, the sentence "should no doubt not a little travel [travail], and that not unprofitably, their Wyzards, Calcars, Oracles, and Altars," and the obscurity of the sense of the word Calcars was pointed out. Mr. E. D. K. Harrison has now kindly suggested to us that the anonymous author perhaps had in his mind the ancient soothsayer and prophet Calchas, who was chosen to accompany the Greeks against Troy, and coined the word to indicate his successors or followers. The suggestion, though not quite convincing, certainly fits the context and is the best yet made.

REVIEW.

Handlist of the Birds of Egypt. By M. J. Nicoll. pp. xii, 120. 31 plain and col. pl. Cairo, Government Press, 1919.

In his introduction Mr. M. J. Nicoll states that since Shelley published his *Handbook to the Birds of Egypt* in 1872, no scientific work dealing entirely with the avifauna of Egypt has been produced. This is not quite accurate, because the second volume of von Heuglin's *Ornithologie Nordost-Afrika's* was not completed till 1873. The references to this writer in Shelley's work are confined to the first volume of the *Ornithologie*, and the very imperfect *Systematische Uebersicht* is always referred to in the latter part of the book. Mr. Nicoll seems to have overlooked this, and in consequence to be only partially acquainted with the evidence on which many species should be included.

Shelley enumerated 352 forms, but many of these had admittedly little or no claim to a place on the Egyptian list. The present work includes no fewer than 436, but about thirty species included by Shelley are now omitted without comment. In most cases we are of opinion that the omission is justified by the circumstances of the case, and there must always be some difference of opinion as to how far "sight-records," unsupported by the evidence of skins, should be accepted. Mr. Nicoll's treatment of these cases seems to be somewhat inconsistent. He admits about fifteen species to the list on the evidence of one or more examples *seen*, of which eight or perhaps nine are due to his own observation. In some of these cases, such as *Mergus merganser*, *Dromas ardeola*, etc., it is practically certain that the identification is correct, but it is surprising to find the British Pied Wagtail, *Motacilla a. lugubris*, included on the strength of one (sex not stated) *seen* by Mr. Nicoll in winter! Another unsatisfactory record is the Nuthatch, *Sitta sp.*, seen by Captain S. S. Flower. In our opinion such cases should be included in footnotes, or at any rate in square brackets only, and not numbered, pending further evidence. On the other hand, certain species recorded by former workers on similar evidence are summarily discarded. As an example of this, let us take the case of the Little Bustard. Von Heuglin (*Ornith. N.O. Afrika's*,

p. 939) states that it appears irregularly in Egypt and only during the winter months; is commonest on the coast near Pelusium, and that he saw some females from the bird market at Alexandria. Yet this species is entirely omitted; while, on the other hand, *Eupodotis arabs* is included, although no Egyptian specimen is in existence, and the sole evidence of its occurrence rests on descriptions of birds seen and reported to Mr. Nicoll by unnamed observers! Von Heuglin could scarcely have been mistaken when he states that the Velvet Scoter only occurs casually in winter on the lagoons of Lower Egypt, and that most of those seen by him were immature birds, yet this species is omitted entirely from the *Handlist*, while, on the other hand, the Crested Coot, which was never personally met with by Shelley, and only recorded by him on the evidence of an unnamed resident as "abundant during the inundations," is included, as is also the Scaup, on precisely similar evidence to that on which the Velvet Scoter is omitted.

The Red-breasted Merganser is included on the ground that Howard Saunders mentions Egypt as a country where it has occurred, but this statement is evidently based on von Heuglin's notice of a female obtained by Dr. Clot and now in the Leyden Museum (*Orn. N.O. Afrika's*, p. 1353). The evidence on which *Sylvia undata* is included and *S. sarda* omitted seems to us of about equal value. A reference to von Heuglin's article on the Sacred Ibis shows that he did not definitely record it as a breeding species at Wadi Halfa, as stated by Mr. Nicoll (p. 68), but merely states his belief that it breeds in the Nile Valley northwards to this place, and that he received young still in down from Batn el Hadjar, Sukot and Donquola. There is also a record of a specimen obtained at Qata in the Delta in 1864. Mr. Nicoll cannot have read von Heuglin's article on the Herring-Gull or, he would not have stated that he "evidently confused this Gull with the Mediterranean species (*sic!*)," and a full account of the breeding of the White-tailed Eagle in the Behéreh (Lake Menzala) is given by the same writer (p. 52), who obtained a couple of almost fresh eggs there, apparently in March. We believe that the Eastern Pied Chat, *Enanthe pleschanka pleschanka* (recorded by Mr. Nicoll as "*Saxicola morio*") is a regular visitor on migration, and that Mr. W. Raw, who obtained the specimen in the Giza Museum, subsequently secured other examples.

No mention is made of the Cirl Bunting, of which a specimen was obtained by Schroder, and the Mistle-Thrush recorded by both Schroder and Captain Boyd is also omitted.

Space will not permit our going into further detail, but it is clear that while we are glad to welcome this new list and fully recognize the good work which has been done by the author and his fellow-workers in bringing the Egyptian list up to date, there is still room for improvement and we trust in a future edition to see many of the defects of the present work eliminated. There is, however, one point which demands a few words. Mr. Nicoll states that as regards nomenclature he has used the names which seemed "most suitable and easily understood." We have searched in vain for any underlying principle in this selection. Here and there the author incorporates the results of Dr. Hartert's latest researches. We wonder how many of Mr. Nicoll's readers would recognize "*Corvus rhipidurus*" at sight, without the aid of the English equivalent! The use of such names as *Phœnicurus ochrurus gibraltariensis*, *Merops orientalis cleopatra* and the prominence given to subspecific forms would suggest that Mr. Nicoll has based his nomenclature on that of Hartert's *Vogel d. Pal. Fauna*, if it were not that

we are at once confronted with names which at once recall the B.O.U. *List of British Birds* and its ill-fated *Nomina conservanda*, while on the next page Mr. Nicoll reverts to the nomenclature of Howard Saunders in 1899, and retains *Saxicola* as the generic name of the Wheatears and *Pratincola* for the Whinchat and Stonechat, although all ornithologists of the present day are agreed that the use of these names in this sense is impossible. We trust that in any future work on this subject, Mr. Nicoll will discard this jumble of discordant principles altogether, and adopt some intelligible system of nomenclature.

The illustrations consist of a series of half-tone photographs of skins and the eight coloured plates recently issued in *Birds Protected by Law in Egypt*. It would be ungracious to criticize too severely illustrations to a work issued at so low a price, but we fear that photographs of skins of small birds will never be of much use as a means of identification. The coloured plates, though very crude, are in most cases recognizable. It is indeed high time, seeing that nearly fifty years have elapsed since Shelley's work appeared, that a new list of the birds of Egypt should appear, and the present *Handlist*, in spite of certain rather irritating defects, will prove extremely useful to students of distribution. We are greatly indebted to Mr. Nicoll for his careful and painstaking researches into the subspecific races which occur in Egypt, which must always be a country of the greatest interest, not only as a meeting place of Eastern and Western forms, but also as a great migration highway, and look forward at some future time to the appearance of a fuller and more complete work on the birds of this country. In the meantime we are glad to welcome this inexpensive *Handlist* as an earnest of better things to come.

F. C. R. JOURDAIN.

LETTERS.

OBSERVATIONS ON THE CUCKOO.

To the Editors of BRITISH BIRDS.

SIRS,—In *British Birds* (XII., pp. 182-4 and XIII., pp. 90-5) I have reported the taking of nine and sixteen eggs from the same Cuckoo (*Cuculus c. canorus*) in the seasons 1918 and 1919 respectively.

It is now my pleasure to inform you that I am compiling from notes made at the time a detailed record of a third season's study of the same Cuckoo, which if desired shall be submitted to you as soon as completed.

The following gives some idea of the results achieved.

This year the same Cuckoo returned to the locality and eclipsed all known records, British and otherwise I believe, by laying no less than twenty-one eggs. The whole of the eggs are, of course, alike and are indistinguishable from the twenty-five taken in 1918 and 1919. I have personally taken over 100 Cuckoo's eggs and have examined many hundreds more, but have yet to see one which could really be confused with the forty-six eggs I now possess from this one bird.

Laying her first egg on Thursday, May 13th, she deposited one regularly every alternate afternoon until on Saturday, June 12th, in the presence of P. B. Smyth, of London, O. R. Owen, of Knighton, and

F. Simmonds; senior and junior, she laid her sixteenth egg. A Tree-Pipit (*Anthus t. trivialis*) had to do duty for the fifteenth egg, there being no Meadow-Pipit's (*Anthus pratensis*) nest ready that day owing to the unfortunate depredations of a Kestrel (*Falco t. tinnunculus*) with young, subsequently destroyed, which in the preceding week had reduced the number of pairs of Meadow-Pipits on the common from nine to four. With a shortage of Meadow-Pipits' nests threatening, the seventeenth egg was laid after an interval of four instead of two days, *i.e.*, on Wednesday, June 16th, and thereafter laying with the usual forty-eight hour intervals the Cuckoo deposited her twentieth egg on Tuesday, June 22nd. Two days later (Thursday, June 24th), instead of laying, she flew down to the only remaining Meadow-Pipit's nest which that day contained one egg, but though she did the same thing again on Saturday, June 26th, by which time the Meadow-Pipits had deserted the nest, it was not until the fifth day after laying her twentieth egg that she deposited her twenty-first and last egg, on Sunday, June 27th, in the deserted nest.

Last year's study enabled me to express the opinion that provided the facilities, a Cuckoo—or at least this Cuckoo—would lay approximately every forty-eight hours. Thus the return of this Cuckoo for a third season's study enabled me this year to prove that, with extraordinary regularity, she would, and when assisted by the provision of Meadow-Pipit's nests did, lay every other day; and by the time the Cuckoo had laid ten eggs this season she had taught me so much that I actually watched her lay and deposit nine of the remaining eleven eggs of the series.

I question whether ever before anyone has been possessed of the necessary information to be able to foretell both when and where a Cuckoo would lay her eggs, so as to have the satisfaction as I had this year of taking friends out on different days to see the Cuckoo take up her position often in a given tree to watch, frequently motionless for an hour or more at a time, her previously selected victim and finally glide down in the most fascinating manner beside the appointed nest, lay and deposit with her beak with remarkable rapidity the egg, and fly away with an egg of the foster-parent in her beak which she invariably removed from the nest in exchange for her own.

Having achieved my ambition this year to break all previous records in the number of eggs observed as laid, I hope if the same Cuckoo returns next season to be able to get the whole egg-laying process finished.

On no occasion during the three years has this Cuckoo deposited more than one egg in any one nest, even though force of circumstances must several times have sorely tempted her to adopt this suicidal habit. As I have already shown, when suitable nests appeared unlikely to be available as required, she twice this year temporarily discontinued laying. Or, to express the same thing rather differently, this Cuckoo only persisted in laying every other day so long as a fresh nest (as opposed to one she had already victimized) of the Meadow-Pipit (her favourite dupe) was made available for her.

If I may I will send you for publication at a subsequent date comprehensive notes detailing (a) the methods adopted for the successful observation of this Cuckoo day by day; (b) the extremely interesting behaviour of the female Cuckoo, with references to her one, two and sometimes three attentive mates; (c) the actual circumstances under which each of the twenty-one eggs was found and the precise hour at which the nine eggs were seen laid and deposited; (d) the manner in

which the Meadow-Pipits about to be victimized behaved immediately preceding and at the moment of the laying and deposition of the Cuckoo's egg; and (e) charts showing, with dates, the number of nests built by each of the nine pairs of Pipits, and the number of times each pair of Pipits were victimized by the Cuckoo.

I want to make it clear that I lay claim to no exceptional knowledge of Cuckoos in general, but trust that what I am able to record about the doings of this particular Cuckoo this year as closely observed by myself and at different times also by ten or more of my friends, may explain why one and all of us found the study of absorbing interest.

EDGAR CHANCE.

9, HAY HILL, BERKELEY SQUARE, W., *July 15th, 1920.*

[We shall look forward to receiving Mr. Chance's detailed report of his most interesting observations.—EDS.]

ARTIFICIAL INCUBATION.

To the Editors of BRITISH BIRDS.

SIRS,—With regard to the Rev. F. C. R. Jourdain's editorial note to my paragraph on the incubation period of the Storm-Petrel, to the effect that Mr. W. Evans succeeded in hatching apparently fresh eggs of this species on the 36th day, in an incubator, I am afraid that such artificial incubation is no guide to the true incubation period of the bird itself.

The eggs of Terns, for instance, hatch in an incubator on the 19th or 20th day, yet in a natural state take 23 to 26 days to hatch. With greater heat they might even be hatched earlier than this, although the young would not survive.

Such artificial incubation of Storm-Petrel's eggs in 36 days, goes to prove that their natural incubation is at least a week longer, *i.e.*, 43 or 44 days.

H. W. ROBINSON.

[Mr. Robinson raises some interesting points as to the value of results obtained by hatching in incubators, but there seems to be no justification for the suggested formula that (roughly) results obtained from incubators only represent four-fifths of the natural period. A study of Mr. W. Evans's paper will show that in many cases the results obtained artificially coincide very closely with those obtained by watching nests. Mr. Robinson states that in an incubator, Tern's eggs hatch out on the 19th or 20th day, while Mr. Evans's period, obtained by the same means ranges from late on the 22nd to the 23rd day! It would be interesting to know what temperature was employed by Mr. Robinson, as it seems probable that his eggs were kept too hot. Some discrepancy in the period might be expected in the case of birds like the Common or Arctic Tern, which often leave their eggs exposed for considerable periods during the day, but there is no reason why it should also occur in the Storm-Petrel, any more than it does in the case of the Wild Duck, Partridge, Domestic Fowl, Cuckoo or many other species. In the preface to Mr. Evans's paper it is distinctly stated that the eggs were not hatched at unnaturally high temperatures, but that great care was taken that the conditions should as nearly as possible approach those of nature.—F. C. R. JOURDAIN.]

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NOTES ON THE BREEDING-HABITS OF THE LITTLE TERN.

BY

THOMAS LEWIS, F.R.S.

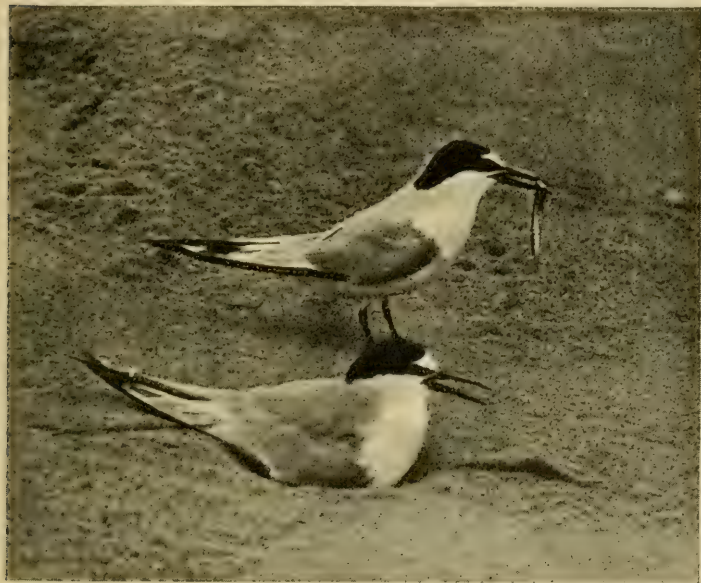
THESE notes on the Little Tern (*Sterna a. albifrons*) would have been a good deal more complete had it not been for the almost daily raids of egg hunters upon the birds' nests in the colony which was under observation. This colony, new last year, is on the southern part of the Norfolk sea coast. The Little Tern, in company with a few pairs of Ringed Plover, nested on the shingle and sand immediately above the usual high-water mark and up to the base of the sandhills, the highest of which formed good posts of observation ; other nests were placed upon high banks of shingle amongst the sandhills.

The colony was formed by some fifty to sixty pairs of birds and at one period there were over forty nests on the beach. The birds and their habits were watched at frequent intervals between the first week of May when a few pairs arrived, until the 19th of June, on which date the colony was almost completely destroyed by an egg-collector who swept three-fourths of the eggs, most of them far gone in incubation and some actually chipping, from the beach. The observations here recorded were made in part through glasses from the sandhills, a large number of nests thus coming under observation within a range of 150 yards, and upon three nests more especially, close in front of each of which a tent was set for several or many days. Some other nests quite near to the tent also came under close and continuous observation.

For many days before the first eggs were laid (the first nest of three eggs was found on May 30th) the male birds began to carry fish to their partners. The female Terns would sit on the sand, stand preening or bathe in the pools of water left by the receding tide ; and here on the strand the male birds would visit them assiduously, usually carrying in their bills a small fish or sand-eel. Along the line of breakers or a little way beyond it, ranged the flying Tern, wheeling about, hovering and, ever and anon, dipping to the sea, with that graceful dive which so characterizes this and the allied species in their fishing.

A Tern comes back from a successful hunt and drops gracefully on the beach, the fish held nipped by the head and

dangling from the point of the bird's bill. With head held up and bill horizontal he takes that number of short, quick steps which bring him beside his mate. He approaches nearer till he faces her and then, if she is sitting on the sand, bows down his head, the whole body being horizontal and the wings raised a little above the level of his back. Sometimes she snatches it at once and swallows it ; sometimes she pays no heed to him, while he trots around, becoming more and



LITTLE TERN : The male bringing fish. The female is calling to him. Note the cleaner margin of the black cap in the male. (Nest No. 1.)

(*Photographed by T. Lewis.*)

more agitated, taking little runs away and back or around and frequently offering the fish again. She may try his patience sorely, maintaining her reserve for very many minutes before she accepts the gift ; her apathy is not infrequently complete, and he at last, in despair, flies away to seek another hen, or returns a little later in renewed solicitation. Now and again the male ends the scene by bolting the fish himself and flying out to sea. When the female takes the proffered morsel, she seizes it across its

middle and with a quick jerk forces it head downwards into her throat. It disappears in an instant. When she takes the fish, the male strikes his curious pose, standing erect with neck and bill craned aloft, he screams triumphantly. It is the time of mating and the scenes now enacted are those which precede and are associated with the act of pairing. From time to time as the birds are watched there comes a Tern carrying fish like many another. His bride hails him



LITTLE TERN: The male offering fish to the sitting female. . She has risen sufficiently to expose the part of one egg. Note the cleaner margin of the black cap in the male. (Nest No. 2.)

(Photographed by T. Lewis.)

with a loud cry and crouches on the sand, her under-feathers erect, her wings drooped and quivering. He drops beside her and struts around, dangling the fish, and after a little time sidles up to her. The fish may now be offered at once and accepted, and almost at once pairing takes place; less frequently the fish is not yet offered, but is retained in the bill of the male while the act of pairing occurs; in that case it is transferred from bill to bill immediately

afterwards, the ceremony of feeding being precisely as already described.*

A few weeks later and the birds are pressing and scratching simple hollows in the sand, laying or sitting in numbers. The eggs are laid at daily intervals, but incubation starts before the second egg is laid (observations on four nests). The period of incubation still remains uncertain, the almost daily interference with the nests rendered a sufficient number of



LITTLE TERN: The male's pose while his mate swallows the fish.
(Nest No. 1.)

(Photographed by T. Lewis.)

accurate observations impossible. At a nest which contained three fresh eggs on May 30th one egg was chipping on the 18th of June, but next day the nest, like most of those remaining on the beach, was robbed. The period at this nest would have been twenty to twenty-two days. During the days

* In the account up to this point it is presumed that the male and never the female brings fish, for where the distinction of sex becomes clearer from subsequent acts, the carrier of fish is always to be identified as the male.

when the eggs are being laid, and for a number of days afterwards, the hen bird sits almost continuously. At irregular intervals, which may be as short as half an hour, but which are usually a good deal longer, the hen will leave the nest at the approach of the male. She stands in the neighbourhood of the nest or flies away while he goes on, but her absence is of brief duration ; five or ten minutes do not pass before she comes again. Usually the male then leaves the nest at once and flies or stands around, sometimes she urges him off the nest by prodding beneath him with her bill. These short rests afforded to the hen bird by the male were recorded at three nests by repeated and daily observations, and I believe them to be the rule. In my experience the eggs are never left uncovered willingly for longer periods than a few minutes, however hot or sultry the day. Incubation is continuous. The Terns show an evident anxiety to keep the eggs covered and return to the nests with much boldness. It is during these same days of laying and early incubation, while the hen bird is almost always on the nest, that she is fed by her mate. At some nests, especially those viewed at a distance, a fish was seen to be brought at almost regular intervals of five to ten minutes over periods of an hour or more. At the nests before the tent the intervals were generally longer, a half hour or even more. It is the rule for the hen to be fed without leaving the nest if the birds show no signs of nervousness, though there are exceptions. In nests placed before the tent, the hen is fed on the nest or at some little distance. If fed while sitting, she rises off the eggs to swallow the fish, standing in the nest's cup and just exposing the eggs. She always greets her mate as he flies over or around with loud cries, which are continued up to the moment when the fish is taken. She may move a foot or more off the nest and take the fish while standing, returning almost at once to sit. When the male is nervous he may call her off the nest and feed her twenty paces or more from the nest or even at the edge of the sea. In some of these last feeding scenes, just before the fish was taken and at the meeting of the two birds, their heads were wagged slowly and regularly from side to side.

During the early days of incubation, when the male bird is about to take the place of the female for a few minutes, a curious incident is often seen. As he flies over or approaches by running over the sand, she picks up, as she sits, fragments of pebble from the surrounding sand, bringing them into the cup of the nest and depositing them. It is a signal of the coming change of place which rarely fails. When he actually

comes to the nest, she rises and walks off ; but not infrequently she continues to pick up stones, sometimes quite large stones or bits of stick, and jerks them to one side with a sharp movement of her head. A similar action is witnessed in the case of the Ringed Plover. This curious display on her part takes place while the male is arranging the eggs beneath him preparatory to sitting, and of it he seems always sublimely indifferent. The purpose, if it has a purpose, is not at all clear. I can record it of the female only, though unable to assert that the action is performed by her alone. Presumably it constitutes the remnant of a nest-repairing instinct, which is all but dead in these birds. The sole repair necessary in a Tern's nest is an occasional deepening of the sandy cup ; this is frequently necessary when the sand is drifting. It is accomplished by rotating her breast upon the nest and flinging out the excess of sand backwards with the feet ; a fact which has been recorded in the case of other species, but not, I think, of the Little Tern. In scooping out the sand, the bird rests forward on her sternum and the depressed angles of the wings.

During the later days of incubation (conclusive observations on one nest only) male and female Tern incubate for alternate periods of approximately an hour. At this nest the new régime started about the fourth day after the laying of the last egg and was continued regularly for two weeks. With the changed régime the male no longer brought fish to the female, each bird hunting its own prey.

It may be asked how the male and female birds were identified. Such identification was absolute at two nests, to which most of my notes refer, for in one an egg was laid while I was in the tent, and at the other the pairing of the birds was seen quite close to the nest ; it occurred actually during the period of incubation. At the third nest identification was by inference ; the bird constantly on the nest during the early days of incubation was naturally regarded as the female. At all these nests the bird identified as the male brought fish to its sitting mate. At each nest, a very few hours in the company of the birds made distinguishing marks clear, and the male or female could be recognized almost at the instant it came in view. At all nests I made careful sketches of the birds' heads, seen in side view, copying accurately the smallest irregularity at the margin of the black cap. Of the six birds none were alike in this respect ; the little variations at the meeting of black and white were in themselves sufficient to identify any one of the six. Judging



LITTLE TERN : Early days of incubation. The male is settling on the nest ; the female has picked up a large pebble which she will soon cast on one side.

(*Photographed by T Lewis.*)



LITTLE TERN : A similar scene to the last. The female has picked up a piece of driftwood after leaving the nest.

(*Photographed by T. Lewis.*)

from these six birds, however, I would say that there are other marks of distinction which, if indeed insufficient to identify male and female, come very near to doing so. The male bird holds himself and his plumage more angularly: the female has a distinctly more demure aspect. The male is the more vigorous in his actions. The margin of the black cap in the male is cut as a cleaner line, the irregularities, often confined to the female, are always greater in the female, and her black cap is not infrequently broken by one or more very small patches of white or grey. I think also that the black of the male's head is a little more deeply pigmented or more glossy, and that it extends a little farther down on the nape. In respect of one pair there was a very sharp distinction in the colour of legs and feet; in the male these were almost bright orange, while in the female they were a very dusky red, almost brown. The actual point upon which I relied for recognition of a bird under observation was, however, the form of the black cap at its margin; until I had seen this clearly and knew my bird, referring to my sketches when in the smallest doubt, I made no note of sex. These little differences in marking are clearly displayed by several of the accompanying photographs.

ON CERTAIN OTHER SPECIES OF BIRDS AND THEIR FORMER STATUS IN KENT.

BY

N. F. TICEHURST, M.A., F.R.C.S.

IN continuation of my recent article on certain species of birds and their former status in Kent (*antea*, pp. 34-37), as revealed by the vermin entries in the Churchwarden's Accounts of Tenterden (1626-7 to 1711-12), it may not be without interest to analyse the entries of the remaining nine that appear therein, though it is clear that nothing very novel is to be gleaned from them. Still, they do give a picture of the abundance of certain species in the seventeenth century and show what results were obtained by our ancestors by trapping round their homesteads in the then vast woodlands of the Weald.

HEN-HARRIER (*Circus cyaneus*).

The only conclusion that can be drawn from the few entries relating to this species is that it was not numerous at that time in the Weald, and that, at any rate for the most part, those that were trapped were mere casual visitors, and doubtless met their fate while ravaging our ancestors' poultry-yards. We have no evidence that the Hen-Harrier ever bred in the Weald of Kent, though it did elsewhere in the county, nor does it appear very probable that at that time there were any suitable areas within its borders. It might be suggested, as in the case of the Kite, Buzzard, and Raven, that four out of the eight entries of this species, consisting as they do of lots of three or four, *may* represent young birds taken from the nest, but in the only one of them in which the date of payment can be approximately determined, it is too early in the year for this to have been so. The reward paid was, except in two instances, twopence a head.

The entries are :—

1679-80.				
To Mattheu Pelham for 2 Ringtaile heads ..	..	0	0	2
1680-81.				
To Tho. Curteis for 1 Ringtaile ..	..	0	0	2
1681-2 (under date May 4th to 21st).				
To Peter East for 4 Ringtailes ..	..	0	0	8
(Under date May 24th to June 3rd.)				
To Tho. Curteis for 4 Jayes, 8 Crowes and 1 Ringtaile		0	0	8
(Under date March 27th.)				
To Tho. Curteis for 2 Ringtayles ..	..	0	0	4

1687-8.						
To John Harman for 3 Ringtayles	..	..	..	o	o	7
1688-9.						
To Tho. Barner 4 Ringtayles	..	..	..	o	8	
To Tho. Barner 3 Ringtayles	..	..	..	o	6	

SPARROW-HAWK (*Accipiter nisus*).*

Compared with the numerous entries of Kites and Buzzards, those of the Sparrow-Hawk are singularly few, as they occur in two years' accounts only and include seven heads in all. This is possibly accounted for by there being no game-keeping in the modern sense of the word in those days, and by the fact that efforts were concentrated on the preservation of poultry to which the larger Hawks and the Crows were far more dangerous. In two other subsequent years' accounts "Hawks," unspecified, to the number of eleven were paid for. These may or may not have been of this species, though it may be pointed out that they were only paid for at half the rate for Sparrow-Hawks, which always fetched twopence a head.

Examples of the entries are :—

1682-3.						
To Peter East for one Sparrowhawke and one Bulfinch				o	o	3
1683-4.						
To Edward Curteis for 1 Jayes head, 1 Bulfinchs head and a Sparrhawkes head	..	..	..	o	o	4
To Anthony Knowlden for 13 Bulfinchs heads & 1 Sparrhawkes head	..	..	..	o	1	3
1688-9.						
To Tho. Hutton 10 Hawkes, 3 Ravens, 25 Crows & Magpies	..	..	..	..	..	1 7½

CARRION-CROW (*Corvus corone*).

ROOK (*C. frugilegus*).

JACKDAW (*Colæus monedula*).

MAGPIE (*Pica pica*).

It is necessary to consider these four species together, not only because they so frequently occur in association in the accounts, but because there is little doubt that, in the case of the first two at any rate, and probably in that of the first three, they were frequently entered indifferently under the name of Crow. From a consideration of the numbers recorded, it is

* Mr. J. H. Gurney points out to me that the Sparrow-Hawk of the old writers was often the Gos-Hawk (*A. gentilis*), and that falconers of this period continually exchanged the names. It would, however, be hazardous, I think, to conclude that any of these entries refer to the latter species.

wellnigh impossible for the one parish to have produced anything like the quantity, had all those entered under this name been Carrion-Crows. All three species are differentiated here and there; but in the large majority of entries they are, I think, not. This uncertainty is unfortunate, for an indication of the former status of the Carrion-Crow in the Weald would have been welcome. We must guess, I think, that it must at any rate have been tolerably common, though certainly for very many years it has been and still is quite a rarity. The others were evidently exceedingly numerous, especially the Magpie, whose wonderful powers of multiplication in the same district the last five years have made evident.

The killing down of these birds as revealed in the accounts was at first sight curiously spasmodic, but it is fairly evident, I think, that from time to time they must have become unduly numerous, and then a determined effort was made to thin them out. No mention at all is made of them in the first three years, and then occurs a single entry for 79 heads:—

1629-30.

Itm pd to James Philcote for the heads of 79 rookes &	
pyes	xiijd..

The next entries do not occur until eleven years later, when a total of 196 were paid for:—

1641-2.

Itm to Edward Yonge's boye for a 160 Rookes heads ..	0	1	4
Itm to Joel Burges his boye for 36 Crowes heads ..	0	0	6

In 1644-5 and 1648-9 to 1653-4 the payments are all entered in a lump sum as for "vermin," so no information is available for these particular years, but there is no mention of any of them in the intervening ones, and none is entered again till 1654-5, when 68 Crows were paid for. In 1655-6 the reward paid, hitherto twopence a dozen, was increased to threepence, and though only 36 Crows and Magpies were paid for in this year, the increase evidently had some effect, for in the next 420 were accounted for, and in the year following 96 Rooks, 470 Crows and 90 Magpies. This effort was continued for another two years, and then a period of slackness set in, which included several years in which none was paid for at all, and which lasted to the commencement of the long and determined vermin campaign, already referred to (*antea*, p. 34), that began in 1676-7. During the ten years 1680-81 to 1689-90, when this was at its height, a total of 8,557 heads were paid for, with maxima in the last two years of 1,249 and 1,296 respectively. By 1691-2 either the Crows and Magpies had become so reduced that it was worth no one's while to collect them, or

the payments for them were suspended, as they completely disappear from the accounts in this year, and do not appear once more till 1695-6. After 1694-5 vermin were no longer entered in detail, but it is evident from the total sums paid that, after another period of slackness or partial close season, another effort lasting for several years was made at the beginning of the next century.

A few transcriptions of the entries out of many hundreds must serve as examples :—

1655-6.									
Itm to George Stace and Thomas fuller for 3 dossen of									
Crowes & Magpies heads	oo	oo	oo	09					
1656-7.									
Paid Scottford & Edward Pix for 6 dossen of Crow heads	oo	or	06						
1659-60.									
Imprimis paid by John Stephens to Stephen Huckstepp									
& boy for 6 dossen & 8 Crowes & Magpies heads ..	oo	or	08						
1662-3.									
Payd Henry Jenner for 3 dozen of Crowes and Jack									
Dawes heads	o	o	9						
1680-81.									
To Goodman ffinch his son for 12 Crowes heads & 1									
Kite	o	o	5						
1681-2.									
To Robt. Young for 12 Dawes & 12 Crowes heads ..	o	o	6						
1683-4.									
To John Wiborne for 6 Jaye heads, 1 hedghog & 3									
Buzards	o	1	1						
more 1 Pulcatts head, 1 headhogg & 3 Buzards ..	o	o	10						
more 2 Ravens, 6 Magpyes, 8 Crowes, 1 doz. of Rookes	o	o	10						
1685-6.									
To John Sheder for 4 dozen of Rookes, Crowes & Magpies	o	1	0						
1687-8.									
To Tho. Drewe for 2 doz. of Crowes & Rookes heads ..	o	o	9						
To Isaac Cloake for 8 Rookes, 4 Magpies & 2 doz. of									
Crowes	o	o	9						
1689-90.									
To Jeremy Hunt for 2 doz. of Crowes, Pyes & 6 Jayes ..	1	0							

JAY (*Garrulus glandarius*).

During the first fifty-three years of the accounts the Jay only appears sporadically at long intervals. This is difficult to account for, as it must always have been a very numerous bird throughout the Weald as it is to-day, and if, as is probable, many of the Crows and Magpies were obtained by trapping and snaring, a certain number of Jays, one would think, must have been caught every year either intentionally or accidentally. It becomes even more surprising when one considers the high reward of a penny that their heads always fetched,

when compared with the value of the other species. The numbers paid for during the succeeding ten years show what an abundant species it really was.

The early entries are :—

1628-9.					
Itm to Thomas Kyt the	28 of May for one	[i.e. Hedge-			
hog] & 3 Jayes heads	.. .. .	vd.			
1657-8.					
Paid Stephen Tamset for 3 jeies heads	.. .. .	00 00 02			
1668-9.					
To Thomas Weller for 3 dossen of Crows heads &					
Magpies heads & Jayes heads	.. .. .	0 0 9			
To James Marten for 6 dozen & 4 Crows & Magpies					
heads & Jayes heads & 2 Kytes heads	.. .. .	0 1 9			

Two others were paid for in this year.

In 1672-3 a few were paid for and in 1679-80, two. In the following year, four years later than the commencement of the big vermin campaign, the people seem to have first turned their attention seriously to thinning out the Jays, and the numbers rose to 192. In this and the following nine years no fewer than 2,273 were accounted for, with a maximum in 1686-7 of 329. No details are available for the following year, but in 1691-2 with the general slackening of effort already referred to, the numbers fell (from 271 in 1689-90) to 30, and in the next two years to three and none. After this nothing more can be said, though the species is mentioned in some of the annual summaries of vermin paid for.

BULLFINCH (*Pyrrhula pyrrhula*).

The entries of the Bullfinch are exactly parallel to those of the Jay, and the reward paid for them was the same. It is mentioned for the first time in 1628-9, and then not again for fifty years. There are three entries for a total of thirteen in the next year, in the year following a rise to 39 is recorded, while, including this and the nine succeeding years, a total of 1,437 were paid for, with a maximum in 1683-4 of 371. In 1691-2 the numbers fall (from 200 in 1689-90) to twelve, and two years later to three. In later years it is mentioned in some of the annual summaries, but no further details can be given.

The three earliest entries are :—

1628-9.					
Itm to Isaake Symons for the heads of 2 bulfinches	..	ijd.			
1678-9.					
To Tho. Curteis for 4 Bulfinch heads & 2 Kites heads		0 1 3			
1679-80.					
To Tho. Curteis for 8 Bulfinch heads	.. .. .	0 0 8			

GREEN WOODPECKER (*Picus viridis*).

It is probable that all the few entries of Woodpeckers refer to the above species (as one quite certainly does), seeing that it is by far the most numerous at the present time and is the one that commonly bores into the orchard trees. It was this, no doubt, that led to its occasional destruction. It only appears in the accounts in four years during the height of the vermin campaign of 1676-90. The entries in the first and third of these are :—

1480-81.

To John Morphett for 4 Crowes heads and 1 Woodpiker	0	0	2
To David Rolfe for 6 Woodpeckers heads	..	..	0 0 6

The third entry for this year has already been given (*vide* p. 36).

1684-5.

To Joseph Greenland for 1 dozen & halfe of Wood-			
packers & Bulfinchs heads	..	..	0 1 6
To Thomas Kite for 1 Gally Birds head	..	..	0 0 1

Four were paid for in 1681-2 and two in 1686-7.

The last quoted entry is interesting as evidence of the antiquity of its still commonly used local name.

THE LAW OF TERRITORY.

BY

J. M. DEWAR, M.D.

THE following note may be found of interest in connection with the "Law of Territory." A male Blackbird (*Turdus m. merula*) began to sing on March 8th in a range of gardens behind houses on one side of a street in Edinburgh. It became evident that these gardens were his territory, within which he soon established three singing-posts. A female arrived on the 16th or 17th. Thereafter the output of song, which previously had been almost incessant, was much reduced. On the 18th the female spent most of the day in wandering through the bushes, while the male was chiefly engaged on the top of his favourite singing-post—a tall tree stump—in forming a shallow cavity by chipping out the touchwood with his bill. In the intervals of chipping he sat in the cavity and made turning and moulding movements, and at length, when apparently comfortably settled in the cavity, performed as if *in copulo*. On the following day the female was observed in the gardens behind the houses on the other side of the street, and in the afternoon of the same day the two birds were seen on the ground between the two areas, the male acting as if he were trying to lead the female back to his territory. The female, however, returned to the new territory and subsequently remained there, not being seen again in the first territory. The male followed her lead and acquired singing-posts and a fresh routine in the female's territory. Only rarely did he return to his territory and then only to feed, never to sing. After some misfortunes, guessed at rather than ascertained, the pair had fledged young out of the nest in the new territory, and partly feeding themselves by the 26th of June.

Mr. H. E. Howard and the late Mr. Brock both noted cases in warblers where the females nested outside of, or in extensions of the territories of the males, and the former observed instances of males deserting a territory in favour of a new one. But no case appears to have been recorded of a female rejecting the territory of her mate and on her own initiative selecting another and presumably more suitable breeding territory, and of a male adopting the territory chosen by the female in preference to his own territory, as happened with the Blackbirds. The territories were quite distinct, being separated from each other by the breadth of the street and the two rows of houses, so that the new area could not be

regarded merely as an extension of the male's territory, and as already noted the female was never seen to cross from the new to the old territory which the male visited but rarely, and then only for food.

In this connection I should like to direct the attention of ornithologists to M. Hachet-Souplet's results obtained with rats in the laboratory (*La Génèse des Instincts*, Paris, 1912, p. 258 *et seq.*) This observer placed a number of rats in a large enclosure, each square metre of the ground being provided with the same weight of food each day. He found that each rat occupied and defended an area, the extent of which was directly proportional to the muscular power of the rat, as measured by a dynamometer. When the squares were provided with unequal quantities of food, the strongest rats did not always occupy the best locations. The first occupation of a square seemed to be due entirely to chance. If the food was sufficient the animal was content, and only where the quantity of food fell below the necessary minimum, did fights ensue for the possession of territories. Privation, however, induced temporary association of the rats in the endeavour to satisfy their needs. Hachet-Souplet inveighs against the assumption that reason, ideas of justice, and the right to live intervene in the behaviour underlying the Law of Territory, and his opinion seems to be fully borne out by the results of his experiments.



NOTES



CIRL BUNTING IN ARGYLLSHIRE.

ON June 6th, 1920, at St. Catherines, Upper Loch Fyne, Argyll, I had the good fortune to see a pair of Ciril Buntings (*Emberiza cirrus*). They both rose from a bramble-covered bank between the road and shore, and alighted on the other side of the road under some large trees, chestnut and lime, and I had ample time and opportunity to examine them minutely with binoculars at about fifteen yards' distance.

The greenish-coloured head and black marking on the throat rendered the male bird very conspicuous, compared with the more sombre-coloured female. The male bird also hopped about in a lively manner, while the female was inclined to squat on the ground.

The following day I was much disappointed to find a motor picnic party spending what seemed to me a long time at the spot, and for the next three days I looked for the birds in vain. However, on the 10th I again saw the male a little bit farther along, hopping about on the road, but this time it seemed much more shy and soon flew up amongst the high branches of a chestnut tree. I did not see them again, although I kept a daily look-out for them until the end of the month.

I may remark that I had previously seen Ciril Buntings in Dorsetshire. It may seem very improbable to find the Ciril Bunting so far to the north, but it was quite impossible to mistake the bird at such close range. W. STEWART.

WOOD-LARK BREEDING IN SOMERSET.

I HAVE great pleasure in reporting that I have this year found the Wood-Lark (*Lullula a. arborea*) breeding in Somersetshire, and this is, I believe, the first time that it has been recorded as doing so. I found my first pair on May 13th (1920). As I came suddenly round a bend the bird rose from a loose stone wall and at once began soaring, spirally, and singing. It climbed to a great height in a wide circle overhead.

After singing for a considerable time it descended into the grass, where two young ones with well-defined eye-stripes were soon noticeable; they followed the old one, running up quickly now and then to receive food as the old bird turned; when she (?) appeared to stab at them once or twice with her beak as she fed them. Neither youngster attempted to fly.

At another breeding-place the singing-bird descended to a

tree top, but the song uttered from the perch was quite inferior to its song in the air, which, excepting perhaps the Nightingale's, is the most beautiful that I have as yet listened to.

STANLEY LEWIS.

UNUSUAL BOLDNESS OF ROBIN IN DEFENCE OF YOUNG.

BIRDS in London gardens are no doubt frequently influenced in their behaviour by constant proximity to human beings, so that this may account for the unusual boldness of a Robin (*Erithacus r. melophilus*) in my garden at Hampstead. This bird has a nest containing young in some ivy on a fence about five feet from the ground. When sitting the bird was remarkably tame and allowed people to crowd round and look at it without moving from the nest. But since the young have hatched the bird swoops down at everyone who approaches the nest closely. If one puts one's head or one's hand close to the nest it darts down, brushing it with its wings and hitting it with its feet and occasionally with its beak as well. Usually it does not strike very hard, but once it just drew blood. The swoop is made from a branch three or four feet above the nest, and the descent is at an angle of about 45°. After striking, the bird sometimes continues its descent to the ground and sometimes rises to another bough overhead. Its persistence in this performance is remarkable, and so long as one keeps quite close to the nest it continues to swoop, making each time the little hissing "tick" which signifies anger.

Yet the bird will feed the young without hesitation when several people are standing within a few feet of the nest, and attacks only when a nearer approach is made. Whether it is the cock or the hen I cannot say, but for the last few days only one bird has fed the young or appeared, though during incubation the male was constantly feeding the female on the nest.

H. F. WITHERBY.

HOOPOES IN STAFFORDSHIRE.

As there are only eight records of the Hoopoe (*Upupa e. epops*) from Staffordshire, and three at least of them are merely names of localities where it is said to have occurred, the following note may be of some interest.

On May 28th, 1920, a Hoopoe was shot at Walsall and set up very badly by a local barber. In June I was told that a "Magpie Woodpecker" had been shot, but from the description I thought the bird would prove to be a Hoopoe, and on examination this proved to be the case. The publica-

tion of a note on this specimen in the local papers led to the discovery that another Hoopoe, shot nearly fifty years ago within the boundary of the borough of Walsall, was still in existence in the possession of the man who shot it, and who kindly allowed me to examine it. It was killed on December 14th, 1872, a remarkable date, and is still in very fair condition.

W. DAVIES.

WRYNECK IN NORTH DEVON.

ON August 12th, 1917, I saw a Wryneck (*Jynx t. torquilla*) on my lawn at Barnstaple. I watched it for some considerable time feeding on something in the grass, which subsequent examination proved to be small ants. I distinctly noticed the curious twisting movement of the head and erection of the head feathers. Its plumage was unmistakable. D'Urban and Mathew, in their *Birds of Devon*, refer to the Wryneck as "a casual visitor of rare occurrence," and in North Devon "a very rare straggler at the period of autumn migration."

J. G. HAMLING.

SUSCEPTIBILITY OF KESTREL'S PLUMAGE TO WET.

THE plumage of the Kestrel (*F. t. tinnunculus*) seems to be peculiarly susceptible to wet. Heavy rain so soaks the body and flight feathers that the bird is sometimes forced to the ground and rendered incapable of flight. During one of many wet days recently, and following a night of steady rain, I found a dead Kestrel by the side of the road. There was no apparent injury, but the feathers were saturated. The stomach appeared to be quite empty, and the bird had evidently died of wet and exposure during the night. The same day another Kestrel was caught, by a friend, on the ground from which it was unable to rise. It was in a thoroughly drenched and bedraggled condition. My sister gave it food and shelter for the night, but it would not eat. In the morning it was quite dry and lively. We poured warm milk and forced some pieces of raw meat down its throat. More meat then thrown to it was eagerly snapped up and swallowed. After a short rest, to allow of the meal being assimilated, it was released, when it flapped across a field, got "on to the wind," and soared away out of view. H. A. F. MAGRATH.

A NEW NESTING-PLACE OF THE GANNET.

WHEN looking northward from Hermaness Hill, Unst, this month, July 1920, I noticed a number of Gannets (*Sula*

bassana) nesting on the big "stack" to the west of Muckle Flugga. I was with Henry Edwardson at the time, and he told me he had noticed some there last year. There seemed to be about 100 pairs on the south side of the "stack": we could not see the north side. This "stack" is called the "Rumblings." There appeared to be another smaller colony on a "stack" farther to the west, but they were on the north side, and we could only occasionally see the birds rise above the edge of the cliff. This "stack" appears to be called "Humla Stack." Mr. Edwardson, who has spent the summer in his little hut on this remote hill for thirty-one years, says he is certain that Gannets never nested here before during his years of watching. These two colonies, with the small colony on Noss, now of ten pairs, which first appeared in 1915, should in time largely help the Gannet population of the world. E. G. B. MEADE-WALDO.

NESTING OF GREAT CRESTED GREBE IN KENT.

WITH reference to Mr. Hale's note (*ante*, pp. 44-5), I may add that a pair of Great Crested Grebes (*Podiceps c. cristatus*) have, I believe, nested in recent years on the lake at Horsmonden, though I have not been there to see them myself. At Eridge, I doubt if more than one pair nested in 1915 and 1916; I have not been there since. On the large ponds near East Grinstead, just in Surrey, several pairs seem to breed annually. On the lake at Bedgebury, near Cranbrook, which appears well suited to them, I saw two male birds in March 1918, but they did not stay to nest. H. G. ALEXANDER.

Although the nesting of this species (*P. c. cristatus*) on the lake at Hever was first recorded by Mr. Trevor-Battye in 1911, the first pair bred there in 1910. In the following year, when they were recorded as breeding, two pairs nested. Since then the number has varied, as many as five pairs having bred in some years. Although the lake is full of pike, the old birds generally seem to manage to rear at least two young ones. Some of them are remarkably tame, and come close up to the bridge where the high road passes one end of the lake. E. G. B. MEADE-WALDO.

[Captain D. H. Meares informs us that Great Crested Grebes nested again this year, in the locality in N. Kent recorded by him, Vol. XIII., p. 59.—EDS.]

TURTLE-DOVE IN SHETLAND.

ON July 13th, 1920, I saw a Turtle-Dove (*Streptopelia t. turtur*) at Cambs in Mid Yell. No doubt this bird has often

reached Shetland and been recorded before, but it cannot be a common visitor. It seemed perfectly strong and well, but was very tame. A man told me he had noticed it about the road near his house for some days.

E. G. B. MEADE-WALDO.

[The Turtle-Dove is a regular visitor to Shetland and Fair Isle on the spring and autumn passage, but in quite small numbers; mid-July is, of course, quite an exceptional date for one to be found there, though not unprecedented.—EDS.]

LARGE NUMBERS OF COMMON SANDPIPERS ON THE COASTS OF ALDERNEY AND DORSET IN SUMMER.

I WISH to call attention to the very large numbers of the Common Sandpiper (*Tringa hypoleuca*) which are to be met with this year, not only in Alderney, but also on the opposite coast of Dorset. I refer to presumably non-breeding birds seen by me in Alderney in May and July and at Weymouth in June, they are normally not uncommon, but this year their numbers are quite unprecedented, so far as my experience goes. It would be interesting to know if this increase is only local or whether the same thing has been noticed elsewhere.

W. R. THOMPSON.

[Those seen in May, and a proportion of the June birds, may quite well have been passage-migrants halting on their way north, and unless a careful watch and record were kept from day to day the movement would not have been apparent.—EDS.]

BLACK-HEADED GULLS RETURN TO THEIR OLD NESTING-SITE IN DELAMERE FOREST, CHESHIRE.

IN *British Birds* (Vol. XI., p. 68) I reported that in 1917 a colony of Black-headed Gulls (*Larus r. ridibundus*) had abandoned the nesting-site they had occupied for some thirty years, during which time their numbers had increased to perhaps five hundred. The only reason suggested was the firing of the gorse surrounding the pool. We afterwards found the birds nesting in reduced numbers, on a pool where the forest is submerged, less than two miles away. Last year they were still at the new site, in spite of the fact that a colony of woodcutters, assisted by German prisoners, must have seriously disturbed them. This year about a hundred birds are to be seen at the submerged forest, while about fifty are back at the old site, which is more secluded and

convenient. There are young at both sites this year. It will be interesting to watch developments in the next few years. F. A. BRUTON.

BEE-EATERS IN SCOTLAND.—With reference to Mr. J. Kirke Nash's interesting article on this subject in our last number (pp. 56-58), we are informed that the bird mentioned by Mr. Nash as having been caught by a gardener has been presented to the Royal Scottish Museum.—EDS.

CUCKOO'S EGG IN TREE-SPARROW'S NEST.—At the meeting of the British Ornithologists' Club on June 9th, 1920 (*Bull. B.O.C.*, XL., p. 155) Mr. P. F. Bunyard exhibited a *Cuculus canorus* egg, together with four of *Passer montanus* that had been taken at Banham, Norfolk, on May 30th, 1918, by Mr. L. W. Leader from a nest in a pollard willow. So far as the exhibitor was aware, this was the only instance known of the Tree-Sparrow being victimized in the British Islands; the Cuckoo's egg was of the common greyish type and weighed 0.222 g. There is a similar combination in the National Collection, taken in Germany and part of the Crowley Bequest, and this was probably one of the two that were included in the exhibition of Cuckoo's eggs at the above-mentioned club on March 31st, 1896 (*op. cit.*, V., p. xxxiv.). Besides these cases Mr. J. Ramberg had a clutch of Tree-Sparrow with a Cuckoo's egg from Styria, and Dresser (*Birds of Europe*, V., p. 210) quotes Mr. A. Benzon of Copenhagen as his authority for including the Tree-Sparrow as a foster-parent. A note by T. N. Postlethwaite (*Naturalist*, 1885, p. 127) on a young Cuckoo taken from a hole in a willow may refer to either the Tree or House-Sparrow, and is inconclusive.

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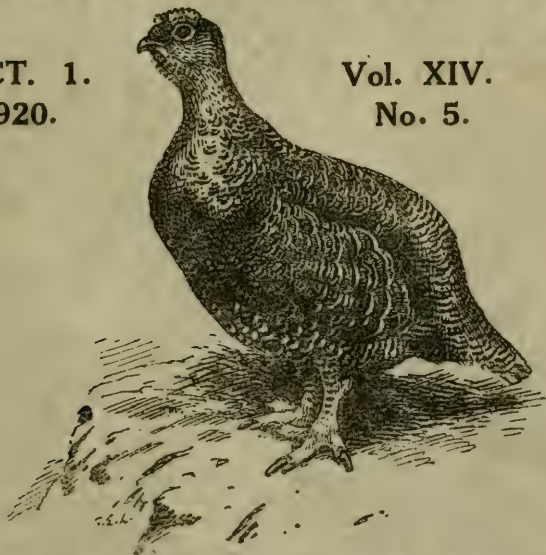
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E. HARTERT, PH.D., M.B.O.U., F.Z.S. ANNIE C. JACKSON, H.M.B.O.U.
REV. F. C. R. JOURDAIN, M.A., M.B.O.U. C. OLDHAM, F.Z.S., M.B.O.U.
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THE HAUNT OF THE BLACK-TAILED GODWIT.

BY

E. L. TURNER, H.M.B.O.U.

THE first nest of the Black-tailed Godwit (*Limosa limosa*) that I saw was high up in the heart of the great belt of sand dunes which protects Holland from the North Sea. These dunes were totally different from my preconceived ideas. As we approached them, leaving behind trim villages, we came along a sandy track through belts of pine and copses of birch, oak and thorn. We might have been in some Surrey or Sussex wood, only for there being about them an indefinable difference. It may have been atmosphere or it may have been the variety and wealth of bird life, and the vegetation in general. As we advanced, the scenery became distinctive. Nowhere in the British Isles could we see such great rolling sand-hills covered with low scrub—mostly dwarf sallow and sea buckthorn. Silvery-white these bushes gleamed against a background of burnished golden sand. In outline, the hills resembled the soft contour of our own Downland, but without its inimitable sheep-bitten grass. These sand dunes are nevertheless quite as beautiful in their way. The bare spaces were carpeted with pale mauve pansies. In the hollows thick copses nestled and in the valleys wide belts of woodland stretched away into the blue distance. It was this admixture of open moorland and wooded dells which gave these dunes charm to the bird lover.

I never recovered from my first surprise at hearing the wild cries of Curlew (*N. arquata*) and Godwit mingling with the soft music of Warblers and Nightingales (*L. m. megarhyncha*). Not just one or two Nightingales but several in every tiny copse, so that the great wide moorland rang with their songs. It was mid-May, and there was a riot of sound. Now and again the mellow flute of the Golden Oriole (*O. o. oriolus*) rang clear above all other sounds.

When in the heart of the dunes, we left the road and walked up a wide valley to a little ridge of sand covered with sallow bushes. Immediately a male Godwit rose from the hill-top and gave the alarm. Wheeling round us he called "Wittau, wittau." His cry was taken up by other Godwits and Curlews and Oystercatchers (*H. o. ostralegus*), until the wild landscape echoed and re-echoed with still wilder cries. The flight of the Godwit when alarmed is very beautiful. His

long legs stretched behind him seem to meet together at the feet, leaving a wide triangular space between the legs. The short black tail is expanded. As the bird wheels above your head, you see the spread tail, then the gap and beyond that the bird's feet. So he floats in the air, uttering wild cries, until you are beyond the danger zone.

The keeper led me straight to a Godwit's nest ; the female was brooding and sat quietly watching us. The nest was



THE HAUNT OF THE BLACK-TAILED GODWIT.

(Photographed by E. L. Turner.)

beneath a bush of dwarf willow ; it was not much of a nest, but the lining of willow down was neatly laid ; in it were four large olive-green eggs, covered with dark brown blotches.

The next morning early I put up my tent and waited. She returned in half an hour ; I saw her when fifty yards away, and watched her daintily threading her way through the bushes. The pale green, half-opened buds of the willow were just tipped with white down. Against these stood the tall bird, clad in plumage of soft browns and buffs. Her very



BLACK-TAILED GODWIT.

(Upper) Arranging the eggs. (Lower) Doubling up her long legs.
(*Photographed by E. L. Turner.*)



BLACK-TAILED GODWIT.

(Upper) Is it safe? (Lower) Contentedly brooding.

(*Photographed by E. L. Turner.*)

long bill is dark brown from the tip half-way towards the base ; but from the middle to the base it is pale ochre. This break in the colouring of the bill has the effect of cutting it in half. Now and again the Godwit flicked her short black tail as she cautiously advanced towards the nest. The last yard she took with a rush, and then stood over the eggs, erect and watchful. The wind bent the half-expanded willow blooms till they brushed her with their downy tips, a gleam of sunlight illuminated her plumage and turned it a uniform colour—a pale fawn tinged with grey. I sat scarcely daring to breathe ; she was the first Black-tailed Godwit I had seen at close quarters. She soon settled down to brood. Her long legs always seemed to give her trouble, and to require a deal of adjusting. She first of all pitched forward, and after much shuffling managed to get her legs comfortably tucked away.

I let her sleep for an hour. From a photographic point of view this is tempting fate. Often the first chance is the one chance, but after all the bird is much more than the photograph. So I let her sleep. There was much to hear and see. Curlews yodelled, Nightingales, Willow-Wrens (*Ph. t. trochilus*) and Whitethroats (*S. c. communis*) sang. Oystercatchers walked around in their peculiarly important fashion, looking as if all the world waited for their Delphic utterances. As the sun rose higher it beat down upon the hot sand, and I could keep still no longer. I whistled softly, and the Godwit awoke. I dropped the shutter and she walked away. But after one or two exposures she grew used to the sound and refused to move. Sometimes she turned her back to me and slept ; then she would suddenly face the camera and study my tent with interest. Now and again she stood up to rearrange the eggs. About 10 a.m. (solar time) she became restless and uttered a low cry ; she seemed to expect her mate, but though he answered her he did not come, so she walked off ; however, she soon returned, and remained brooding until I left.

I afterwards saw many Godwits in many places. As they are not particular in the choice of a nesting-site it seems strange that they no longer nest with us. I found them on the open marshes and on the fields, as well as in the sand-hills. I was never able to catch the young ones ; they vanish like magic as soon as they can run.

SOME NOTES ON THE NESTING OF THE NUTHATCH.

BY

A. H. MACHELL COX.

ALTHOUGH the Nuthatch (*Sitta europæa britannica*) is well known and does not shun observation, I am venturing to put together one or two notes, partly on habits which I have not seen commented on. The most remarkable may perhaps be an individual peculiarity, but I am inclined to think there is more in it. For two years a box was used at a height of about 30 feet in a wych elm close to my house. On both occasions the ground beneath was littered with green leaves quite undamaged, which the birds stripped off from all the twigs near the box; I came to the conclusion that they prefer to have an uninterrupted view of the hole and its immediate surroundings. Three other boxes since used were already fully exposed to view, and in their case no leaves were pulled off. The male is always, I think, on duty while the female is building. For years I have been in the habit of taking down notes on his different whistles, so insistent and arresting as to surprise the least observant. I should say that there are seven—not more—distinct themes, with variations thereon. A ringing “twee, twee, twee, twee!” is chiefly characteristic of a male on guard, assuring the busy worker that the coast is clear. This is very different from his agitated alarm-note, should the Starling (*Sturnus v. vulgaris*) intrude in any way, although the plastering precautions have really made his stronghold impregnable. Singularly enough my own inspection of a box at any stage has invariably been watched without protest, even when it has involved handling the eggs or young. The box referred to above was of German make and originally designed for the smaller Tits. The Nuthatches coveted it when it was in the possession of a Blue Tit (*Parus c. obscurus*), and spent many laborious hours at frequent intervals enlarging the hole; their siege, prolonged well into May, was unsuccessful, and they did not force an entrance till many months later, in time for the following season. Even in these circumstances endless trouble was taken with plastering both inside and outside the hole; they did not reduce its circumference at all, but smoothed and rounded off the edges. Both birds took their turn, at any rate at the preliminary work, which

seems to be indispensable and occupies much the larger portion of the whole time spent ; this consists of incessant hammering to produce a rough surface which will take the subsequent stucco. Frequently it needs the most minute inspection to detect the results of all this labour. The amount of bark collected for the nest varies very much according to the requirements of the cavity, and the part taken by the male is also an uncertain factor. I have seen him pull off a long strip from a birch tree, roll it up and hand it over to his mate ; one year I observed him carry almost his share to the box, but instead of entering it he would endeavour to drop his pieces through the hole, with the frequent result that they were blown back and lost ; again this year, as far as I observed, his part was confined to encouraging and guarding his mate while at work. I have insufficient data to speak of the length of incubation, but after they are hatched the young are usually a full 24 days in the nest, leaving it in the first or second week of June. The parents bring food, on an average, about once a minute throughout the day, and at one nest I noticed the curious fact that the young began to clamour, not before or during a visit, but immediately after it. They are still fed very assiduously for a long time after they are fledged, and the hard-worked parent is worn to a shadow compared with the plump offspring.

This year I secured a more or less ready-made box from the trunk of a hollow tree which had been cut down. Having sawn off a portion about 15 inches in length, with a cavity about 7 inches in diameter, I bored a lateral hole about 3 inches deep as an entrance, boarded up one end as a floor, and supplied a removable slate roof. With some difficulty this was securely fixed 12 feet up in the angle formed by the twin stems of a Scotch pine. This faced a boys' playground constantly in use, but within two days (February 23rd) a pair of Nuthatches were overhauling it. By the middle of March they were seriously thinking of nesting operations, but for a week they could not make up their minds between the attractions of this and another box with an entrance hole large enough for an Owl. Finally their choice fell on the new one, and the work began in earnest. The plastering was not all done first, but from time to time was resumed as a pleasant interlude during the laborious collection of materials. The lower strata were composed of big coarse bits of bark and debris from a place where trees had been sawn up in the winter. These chips were often more than

four inches long ; they were by no means selected at haphazard, and, unlike the thoughtless Jackdaw (*Colæus monedula*), the Nuthatch invariably held them by one end in the same line with its body, so that they could be inserted into the hole without difficulty. At a later stage the finer inside bark of pines was chiefly used, but a few close at hand was also frequently visited despite the protests of some Chaffinches nesting in it. Roughly speaking, three weeks were occupied in constant work, and then 8 eggs were laid. Actually only one hatched out, one of the eggs having the yolk dried up and rattling about in it like a pea. After frequent inspections the slate roof was plastered down from the inside. The parents, curiously enough, were observed to secrete bread and other food in crevices of the bark even while they were busy providing for their nestling. Miss Turner has thrown some doubt on the storing habit of these birds, but I have observed it again and again, and less frequently in the case of the Coal Tit (*P. ater*). After the young one flew (June 1st) I carefully emptied the nest and expended some hours counting the separate pieces of bark. In all, the materials weighed just 31 ounces and there were 13,300 bits of bark (including about 400 chips of wood and 100 dry ilex leaves). It is probable, of course, that the number was increased by brittle portions breaking off under the process of attrition, but against this it was impossible to clean the box completely out, and many flimsy bits must have stuck together in the counting. The most liberal allowance for error would leave at least the prodigious amount of 10,000, and in the earlier stages it was unusual for more than one bit to be brought at a time.

Finally, I have seen the Nuthatch catch an insect on the wing ; I have seen it catch a nut which it had accidentally dislodged from the crevice where it was being hammered ; I have seen it stand on the edge of a jam jar and drink the water supplied for poultry ; and I have seen it hop with extraordinary rapidity after a nut which I threw along the terrace and overtake it before it stopped rolling. I can well understand that it is easily tamed.

SOME NOTES ON DIVING DUCKS.

BY

CHARLES E. ALFORD, F.Z.S.

IN all the wonderland of Ornithology there is, perhaps, no study more fascinating than the habits of Diving Ducks. The freedom and grace of their movements, the ease with which they slip beneath the waves, to reappear, like little sea-witches, apparently from nowhere, and the fact that we as yet know so little of their movements when once they have vanished into the depths, naturally fill one with a longing to learn more about this strange side of their lives.

Only recently several interesting notes on the periods of dives have appeared in *British Birds*, and perhaps a few of my own observations, conducted chiefly along the coast of the North Pacific, and covering a period of many years, may in their humble way throw yet another ray of light on this interesting but obscure subject.

As one of your contributors has already stated, accurate observation is extremely difficult, and I should like to add, intensely exhausting when sustained for any length of time, for two reasons: the short interval between the dives, during which one must record one's observations; and the great strain on the eyes from being fixed almost continuously upon the water in order to watch for the duck's reappearance on the surface.

My observations have, in most cases, been conducted in salt water, usually in a little bay that varies in depth from one to five fathoms at high tide, and of which I know every yard of the bottom. The species that have come under my notice comprise the following: the Surf-Scoter (*Oidemia perspicillata*), the White-winged Scoter (*Oi. deglandi*), the Buffel-headed Duck (*Bucephala albeola*), the Goldeneye (*B. clangula*), the Scaup (*Nyroca marila*), the Harlequin-Duck (*H. histrionicus*), and the Red-breasted Merganser (*Mergus serrator*). Of these, the Buffel-head, Surf-Scoter, and Harlequin can only be considered stragglers to the British shores, whilst *Oi. deglandi* has never yet, I believe, favoured us with a visit.

Regarding the question of depth of water and its relation to the period of the dive, that has recently been raised in your columns, it has been my experience that, whilst ten consecutive dives of one individual in a given depth may show great regularity, those of another individual, in the same

depth, will disclose a variation between the longest and shortest dive of as much as fifteen seconds, or even more. The period of submersion is not, therefore, always a reliable guide to the depth of water; and it is only by taking an average of several consecutive dives that we can hope to make deductions of any value.

Most species, I find, have their favourite depth and stick to it, and in this case a knowledge of their habits will assist us.

Thus, if we see a Buffel-head diving in, to us, unknown waters, we may—irrespective of the length of its dives—reasonably conclude that the depth does not exceed two fathoms, because this species seldom or never dives at a greater depth. But in the case of deep-sea feeders, such as the Surf-Scoter—a duck that has, incidentally, occurred on several occasions in Great Britain, and which dives in any depth from one to five fathoms—a single dive of, say, forty-five seconds would be quite an unreliable guide; for I have known this bird to remain submerged for that period both in one and a half and three fathoms. On the other hand, four or five consecutive dives of that duration would rather point to the greater depth.

There is, I think, one very obvious explanation of the varying periods of different dives. In addition to molluscs and marine plants, fish also play a large part in the diet of nearly all marine ducks. But in order to catch these they do not necessarily have to dive to the bottom, and I strongly suspect that the period of the dive depends, in many cases, not so much on the depth of water, as on the piscatory skill of the feathered angler. All the species mentioned in these notes occasionally catch quite large fish, and it is not unreasonable to suppose that an unusually refractive victim, or even an extra tough mollusc, might considerably delay the captor's return to the surface.

As a general rule, however, there can be no doubt that depth of water, after the first fathom, does play a large part in determining the period of submersion; and this is, I think, borne out in the table of dives (p. 108), taken from my records. The time is in seconds, the depth in fathoms, and I have, of course, made allowance for the state of the tide.

It would seem that the period of the dive not only increases with the depth of water, but that it also tends to become more regular.

As an example of the variation in the periods of individual dives and sets of dives, I cannot do better than give a few further extracts from my records. The first three sets may

fairly be termed "regular," whilst the remaining two show considerable variation. The figures represent the time in seconds—those in brackets the intervals on the surface:

Buffel-head .. 15 (8) 20 (7) 20 (8) 20 (5) 23 (4) 20 (6) 22 (5) 19.

Scaup .. 27 (11) 25 (11) 29 (14) 28 (19) 27 (13) 28 (12) 26 (13) 25.

Harlequin .. 14 (15) 20 (15) 18 (18) 19 (15) 20 (15) 13 (12) 24 (16) 20 (14) 20 (16) 20 10 21 (15) 19

Surf-Scoter .. 32 (14) 22 (12) 28 (16) 19 (18) 28 (18) 30.

Buffel-head .. 12 (9) 19 (9) 26 (9) 3 (8) 22 (13) 20 (5) 24 (11) 28 (4) 27 (6) 22.

From the above and many similar figures, which lack of space forbids me to quote, it would appear not only that the intervals between the dives are always much more regular than the periods of submersion, but that the length of the interval has, presumably, no bearing on the period of the succeeding dive. It is true that my record for a Goldeneye—55 seconds in one fathom—out of 170 dives, was preceded by the unusually long interval of 45 seconds; but on comparing this with other records, I believe such an interval, in this case, to have been merely accidental.

The length of the interval is nearly always shorter than the period of the dive—usually about one half to two-thirds of it

TABLE SHOWING RELATION OF DEPTH TO PERIOD OF DIVE.

SPECIES.	Depth.	Number of consecutive dives.	Longest.	Shortest.	Average.
Surf-Scoter	1	7	32	19	26
" " " "	1	9	28	10	20
" " " "	1½	7	34	21	27
" " " "	2	6	38	30	35
" " " "	3	4	45	42	43½
White-winged Scoter	4	8	56	43	49
Buffel-head	1	9	28	20	24
" " " "	1	53	27	14	21
" " " "	2	9	29	21	26
Goldeneye	1	31	33	18	26
" " " "	1	17	28	16	23½
" " " "	1½	23	32	22	26½
" " " "	2	8	30	25	27

—but here again the figures show such bewildering variation in different individuals and species that it is impossible to lay down any definite rule.

Marine ducks appear to feed at all states of the tide and weather, and at all hours of the day ; but they are most active on dull, rainy and misty days, when the tide is low. The Buffel-head, Harlequin, Goldeneye, and Red-breasted Merganser are all day-feeders, but even nocturnal species, such as the Scaup and White-winged Scoter, may frequently be seen diving during the day.

It is not only for the purpose of feeding, however, that ducks make use of their wonderful powers. When hard-pressed they always dive, though most species, I find, prefer to rely upon their wings when they receive sufficient warning. Much of their love-making also takes place beneath the waves. I once watched eight male Surf-Scoters wooing one female and a most absurd spectacle it was. Immediately the female dived, down went all her admirers in pursuit. Then, after a lapse of about forty seconds, the males would reappear one by one, the female, who was always the last to rise to the surface, being invariably accompanied by one male ; but whether it was the same male on each occasion I was unable to distinguish. For a few seconds pandemonium would reign, the rejected suitors splashing through the water and pecking at their rivals in the most vicious manner, whilst the object of their desire floated serenely in their midst, apparently well pleased that she should be the object of so much commotion. Then she would dive again, and so the performance continued for over an hour, when they drifted out of sight.

Owing to the clearness of the water in this part of the world, I have on several occasions been able to watch the movements of different species, including Scaup, Goldeneye, Buffel-head, and Red-breasted Merganser, when feeding on the bottom in the more shallow parts of the bay. For my house stands high up on the very fringe of the beach, and from my study window one can, under some conditions, obtain a wonderfully clear view of the ocean bed. When descending to the bottom, all the above species use the legs as paddles, working them at right angles to the body, with wings close to the sides, and spreading the tail fan-wise to act as a rudder. In rising to the surface they seem to depend entirely on their own buoyancy, and when ascending, remain absolutely motionless.

And surely there can be no prettier spectacle in all nature than a group of these little sea-nymphs plashing and tumbling

amid the breakers. For, once beneath their element, they seem no longer to be ducks, but rather some strange creatures from a fairy tale ; and the sight of a diminutive Buffel-head as it shoots through the limpid, bubbling water, its little flapping paddles showing bright red against the snow-white flanks, suggests almost anything rather than the plump and extremely material member of the Anatidæ that it actually is.

Their speed beneath the water I should estimate to be, at the very least, one foot per second in the case of the smaller species ; in the Merganser, considerably more.

In conclusion, I need hardly say that there is no intention in these notes of refuting the opinions of other and possibly more experienced observers. Deductions based on the findings of a single individual, especially upon such a subject as the present, can be of little scientific value by themselves. They may, however, assist us to our goal ; for it is, after all, only by comparing the statements of a great many observers that we can hope to arrive at any useful conclusions.

THE SALE OF THE DUCHESS OF PORTLAND'S MUSEUM IN 1786.

BY

H. S. GLADSTONE, M.A., F.Z.S.

IN 1918 I purchased a copy of *A Catalogue of the Portland Museum, lately the Property of the Duchess Dowager of Portland, deceased : which will be sold by auction by Mr. Skinner & Co. on Monday, the 24th day of April, 1786, and the thirty-seven following days.* This catalogue is included by Messrs. Mullens and Kirke Swann in their *Bibliography of British Ornithology* (1917) pp. 477-8, and they give an interesting account of the collection and its owner. My copy is annotated with the names of the purchasers and the prices, of each lot, and it may therefore be of interest to place on record these details so far as they relate to British birds.

The student of present-day sales is at once struck by the bargains (from a modern point of view) that were then going a-begging. During the thirty-eight days 4,156 lots were sold for £10,976 12s., the most famous item being probably the "celebrated antique vase, or Sepulchral Urn, from the Barberini cabinet," which was bought by Tomlinson, on behalf of the Duke of Marlborough, for £1,029. The Portland Museum was chiefly devoted to conchology, and this is not the place to gloat over the low prices realized for prints, drawings, jewels, china, miniatures, snuff-boxes, articles of vertu, *objets d'art*, etc., etc.; the fate of the ornithological lots was as follows:—

(p. 38.)		BIRDS' EGGS.		Purchaser.	Price.
Lot.					
909	Sixteen species of Birds' Eggs, mostly English—some of them rare; amongst them the Gold and Silver Pheasant, and a Parrot's Egg			Cash	0 10 6
910	Thirty cards of Eggs of British Birds, some of them scarce—labelled... ..			do.	0 10 0
911	A number of cards, containing Eggs of British and foreign Birds, many of them rare			do.	0 10 6
912	Nineteen large and small cards, of various Eggs, chiefly of sea Birds and the Hawk kind			do.	0 5 0
913	A box divided into 36 partitions, containing many curious Eggs, mostly of sea Birds, labelled, from Scotland...			do.	0 9 0
914	Various Eggs of large marine and land Fowls			do.	0 6 0

BRITISH BIRDS' NESTS, WITH THEIR EGGS.

(pp. 63, 64.)

		Purchaser.	Price.
1429	Fifteen Nests, with their eggs, <i>all labelled</i> , amongst which is the Nightingale, the Bunting, the Sedge-bird, the <i>Motacilla arundinacea</i> , described in the <i>Philos. Transactions</i> , 1785, by <i>Mr. Lightfoot</i> , etc.	Cash	0 3 6
1430	Seventeen ditto, including the golden-crested Wren, the Petty-chaps <i>with the bird</i> , the Nut-hatch, the Whin-chat, etc., <i>all labelled</i>	do.	0 3 0
1431	Twenty ditto, amongst them <i>Tringa Hypoleucos</i> , or Sand-piper; lesser Field-lark, long-tailed Titmouse, Wheat-ear, Reed-sparrow, Willow-wren, Black-cap, etc.	do.	0 2 6
1432	Eighteen ditto, among which is the <i>Turdus torquatus</i> , or Ring Ouzel, the red-backed Butcher-bird, the Tit-lark, <i>with a Cuckoo's egg in it</i> , lesser crested Lark, <i>Muscicapa atricapilla</i> , or Cold-finch, etc.	do.	0 2 0
1433	Fifteen ditto, including four Goldfinches, the Brambling or Mountain-finch, Bull-finch, yellow Wag-tail, etc. ...	do.	0 2 0
1434	Seventeen ditto, amongst them the Wood-lark; the Sky-lark; the Pippet-lark, <i>and a new species, with the bird</i> ...	Humphreys	0 2 6
1435	Twelve ditto, amongst which are the Brambling, the Whin-chat, the Petty-chaps, the Stone-chatterer, the Red-start, etc.	do.	0 2 0
1436	Twelve ditto, including the Long-tailed Titmouse, the red-headed Linnet, the Whitethroat, Willow-Wren, Reed-sparrow, etc.	do.	0 2 0
1437	Thirteen ditto, amongst them the Sky-lark, the Fly-catcher, the Greater Titmouse, the Hedge-sparrow, <i>with a Cuckoo's egg in it</i> , the Creeper, and the Golden-crested Wren, etc.	do.	0 3 0
1438	Eight ditto, amongst which are the Greater Butcher-bird, <i>a very curious one of the Nut-hatch</i> , <i>Falco Palumbarius</i> L. or Furze-hawk, and <i>a foreign Hang-nest</i>	do.	0 3 6
1439	Nine ditto, amongst them the Ruffs and Reeves, the Gos-hawk, Sparrow-hawk, Hen-harrier, Red Butcher-bird, etc....	do.	0 2 0
1440	Thirteen ditto, including the Sedge-Bird, the Dob-chick, the Black-cap, Wheatear, etc.	do.	0 2 0
1441	The Water-Ouzel, <i>very rarely seen</i> , a <i>Motacilla arundinacea</i> , and a foreign Hang-nest	do.	0 3 0

1442	The Kestrel-Hawk, and an Ostrich's egg	Purchaser.	Price.
		Humphreys	o 3 6
1443	<i>A very fine and complete collection of near two hundred species of British Birds' eggs all arranged and named according to the Linnæan system</i> ...	do.	4 6 o

BRITISH AND FOREIGN BIRDS.

(pp. 73, 74.)

1642	Ten pair of British Birds, of both sexes, among which are the Ring Ouzel; <i>Picus villosus</i> , not before known to be British; <i>Sturnus Cinclus</i> , <i>Emberiza Nivalis</i> ; the red-backed Butcher Bird; the <i>Muscicapa Atricapilla</i> , or Coldfinch, of Pennant; a single specimen of the Bohemian Chatterer; and the head and wings of <i>Rallus Porzana</i> L. or lesser spotted Water Hen, etc.	Walker	o 7 6
1643	Forty-three specimens of English Birds, among which are various species of Larks; the Sedge Bird of Pennant; the Petty Chaps; the Willow Wren; the red-headed Linnet; the Whin Chat; the Stone Chatterer; the golden-crested Wren; the Black Cap; the small spotted Woodpecker, etc.	Cash	o 6 o

BRITISH AND EXOTIC BIRDS IN GLASS-CASES.

(pp. 74, 75.)

1661	The <i>Parus biarmicus</i> L. or bearded Titmouse, male, female; the Dartford Warbler, <i>Latham's Synopsis of Birds</i> , page 435, and <i>Motacilla Hyppolais</i> L. or Petty Chaps, in 3 cases	do.	o 11 o
1662	<i>Picus Minor</i> L. or lesser spotted Woodpecker; <i>Motacilla Hirundinacea</i> , a new British Bird with its nest and egg.—See Mr. Lightfoot, in <i>Philos. Transactions</i> , 1785, and a Pippet Lark, in 3 cases	Humphreys	1 5 o
1663	Two fine Tit-Larks, in 2 cases	Cash	o 8 6
1669	A large and fine crested Grebe, with its wings extended, in a neat mahogany glass case, with a looking-glass back, lock and key	Walker	2 5 o

The prices, realized in 1786, are so low as to excite modern cupidity, and the catalogue fails to satisfy present-day curiosity since the description of some of the lots is so incomplete that many of them may have included desiderata of first-class importance.

(a) Lots 910/912, testify to the old-time practice of pasting birds' eggs on to cards; a method of displaying their treasures long ago abandoned by oologists.

(b) Lot 1429, "the *Motacilla arundinacea*" here included is probably the Reed-Warbler.

(c) Lot 1430, "the Petty-Chaps *with the bird*" is probably the Garden-Warbler. (See (q) below.)

(d) Lot 1431, "the Lesser Field-lark" is probably the Tree-Pipit and the "Reed Sparrow" is the Reed-Bunting.

(e) Lot 1432, the "Tit-lark" is probably the Meadow-Pipit, the "lesser crested Lark" is the Tree-Pipit, and the "Cold-Finch" is the Pied Flycatcher.

(f) Lot 1433, the nest and eggs of "the Brambling or Mountain Finch" if taken in Great Britain excite interest, though the species has been reported as having nested in Scotland. (*A Practical Handbook of British Birds*, ed. by H. F. Witherby, 1920, p. 98.)

(g) Lot 1434, "the Pippet-lark" is presumably the Meadow-Pipit, and the description "*a new species with the bird*" gives no clue and renders astonishment the greater that this lot should have been knocked down at but half-a-crown!

(h) Lot 1435, includes "the Brambling," "Pettychaps" (see (f) and (c) above) and "the Stone-chatterer" is probably the Stonechat.

(i) Lot 1436, "the red-headed Linnet" is probably the Linnet, and the "Reed Sparrow" is the Reed-Bunting.

(j) Lot 1438, the "Greater Butcher-bird" is the Great Grey Shrike, which is but very rarely seen in summer in Great Britain, and of which there is no authentic case of its having nested here. The "*Falco Palumbarius L.*" is the Goshawk, for which "Furze-Hawk" would appear to be a new name.

(k) Lot 1439, "Red Butcher-bird" is, of course, the Red-backed Shrike.

(l) Lot 1440, "Sedge-bird" is the Sedge-Warbler, and "Dob-chick" is the Little Grebe.

(m) Lot 1441, "the Water Ouzel" is the Dipper, and it is curious that it should be catalogued as "*very rarely seen.*" "*Motacilla arundinacea*" (see (b) above).

(n) Lot 1443, at £4 6s. was certainly one of the bargains of the sale.

(o) Lot 1642, includes a pair of "*Sturnus Cinclus*," *i.e.*, Dipper; "Coldfinch," *i.e.*, Pied Flycatcher; "a single specimen of the Bohemian Chatterer," *i.e.*, Waxwing; and "the head and wings of the Lesser Spotted Water Hen," *i.e.*, Spotted Crake; the main attraction, however, of the lot was a pair of "*Picus villosus*, *not before known to be British.*"

These Hairy Woodpeckers were said to have been shot by a Mr. Bolton "not far distant from Halifax in Yorkshire." (Latham, *Supplement to the General Synopsis of Birds*, 1787, p. 108), "in the park of Sir George Armitage, Bart., at Kirklees Hall" (Latham, *A General History of Birds*, Vol. III., 1829, p. 389). Mr. Bolton "was known to have made a collection of North American birds, and hence an opinion, very likely just, arose that instead of the English Halifax, the capital of Nova Scotia was meant." (Yarrell, *A History of British Birds*, Vol. II., edited by Alfred Newton, 1876-1882, p. 485). The whole lot, at 7s. 6d., was a remarkable bargain!

(p) Lot 1643, "Sedge Bird" is Sedge-Warbler; "Petty Chaps" is probably the Garden-Warbler (see (q) below); "red-headed Linnet" is probably the Linnet; "the Stone Chatterer" is probably the Stonechat; "the small spotted Woodpecker" is the Lesser Spotted Woodpecker.

(q) Lot 1661, "*Motacilla Hyppolais* L." is the Chiffchaff, and since this is the only instance in the catalogue where the name "Petty Chaps" is identified by a Latin designation, it is presumable that in other lots the name Petty Chaps denotes the Garden-Warbler.

(r) Lot 1662, is remarkable in that it contained "*Motacilla Hirundinacea*, a new British bird," this being the first identified specimen of the Lesser Whitethroat with its nest and eggs. "Pippet Lark" is the Tree-Pipit.

(s) Lot 1663, "Tit-Larks" are probably Meadow-Pipits.

(t) Lot 1669. This "*neat mahogany glass case, with a looking-glass back*" would nowadays be regarded as a curio, and one wonders why a lock and key were provided.

John Latham made use of the specimens of birds in the preparation of his great ornithological works, and William Lewin drew many of his plates, more especially those of the eggs of British birds, from examples in the Museum (Mullens and Kirke Swann, *Bibliography of British Birds*, 1917, p. 477). Doubtless amongst the prints and drawings there must have been many which were interesting from an ornithological point of view, and Lot 2809: "*The original drawings of Birds, by Albin, most beautifully coloured after nature, 202 in number, on vellum, 2 vols.*" (which realized £32 17s. and were bought by "Cash") is an item which may be quoted in illustration of this.

NOTES

WOOD-LARK BREEDING IN SOMERSET AND DESCRIPTION OF NESTLING.

THE impression left by Mr. Stanley Lewis's interesting note on this species (*antea*, p. 91) might be that the Wood-Lark (*L. a. arborea*) is almost absent from Somerset, but this is fortunately not the case. Though possibly there may be no printed record with full data of the discovery of eggs or young, the species has certainly nested for some considerable time in several spots in the county. I have watched the birds and listened to the song in several localities in west Somerset, in the breeding-season, during the last twenty years, and I have also a good many records of the occurrence of the bird in the breeding-season from other observers. The bird is not generally distributed in the county, but is present in certain localities, and doubtless often overlooked. The only Somerset-taken eggs I have seen are a clutch of four in Taunton Castle Museum, taken near Milverton on April 28th, 1900. As no description of the nestling of this species is given in *A Practical Handbook of British Birds*, the following notes I once made on four nestlings about three days old may be of interest: Down grey, almost having the appearance of lavender-grey, long on head and plentiful. Mouth inside orange-yellow, two black spots at base of tongue and another at tip, externally flanges, yellowish-white. According to the *Practical Handbook*, in the Sky-Lark of same age the down is very pale straw colour, the mouth inside dull yellow and the flanges externally white.

F. L. BLATHWAYT.

LATE NESTING OF THE SPOTTED FLYCATCHER.

I WAS in Wiltshire on September 6th, 1920, and noticed a brood of Spotted Flycatchers (*Muscicapa s. striata*) being fed, the young birds being distributed on the various ledges of a church.

It seemed fairly clear that they had left the nest not more than about two days before. This was, no doubt, a second brood, but I have not previously found this species nesting so late.

D. W. MUSSELWHITE.

[The above is the latest date of which I have any note, but young are occasionally found in the nest up to mid-August. I have seen fresh eggs on July 23rd in Derbyshire,

and Mr. H. S. Davenport records young in the nest on August 12th.—F.C.R.J.]

LESSER WHITETHROATS IN DEVON.

THE reported occurrences of the Lesser Whitethroat (*S. c. curruca*) in Devonshire do not number more than about a dozen. On August 19th I saw some by the Exeter Canal at Countess Wear Bridge, a very fine spot to observe migrants. I could not ascertain the exact number, but in a stay of about two hours there I never saw more than two together. They were with a very large number of Chiffchaffs (*Ph. collybita*) and Willow-Warblers (*Ph. trochilus*) and also a few White-throats (*S. c. communis*). T. P. BACKHOUSE.

[There seems to be but little doubt that the Lesser White-throat is extending its range westward, as it now nests in both the north and the south of the county, in the latter in some numbers at one place (*vide* Vol. VII., pp. 92, 206). As a spring migrant it was recorded annually between 1907 and 1913, on May 10th, 1910, in some numbers, while on May 13th, 1907, it was taken at one of the lights. As an autumn migrant the only definite record appears to be the one seen by Mr. Cummings at Morthoe (*l.c.*, p. 92), though there are several records of it from Cornwall and the Scillies at this season.—EDS.]

GREAT SPOTTED WOODPECKERS IN INVERNESS-SHIRE.

DURING the month of July 1920 I was staying in the forest of Rothiemurchus (near Aviemore, Inverness-shire). On the southern outskirts of the forest, near Loch Gamna and Craig Kinapol, which separates Rothiemurchus from Glen Feshie, the Great Spotted Woodpecker (*Dryobates m. anglicus*) was seen and heard. Here the forest consists not merely of fir and pine, but there is much birch and also a few poplar trees. During the first two weeks the Great Spotted Woodpecker was seen three times, once two together. Young birds were not seen, though on one occasion two or more were heard calling from the tops of tall trees, but attempts to get a view of them failed. A nesting hole was looked for in likely trees, but not discovered, though a shallow boring was found in a dead birch.

KENNEDY ORTON.

CUCKOO'S EGG IN TREE-SPARROW'S NEST.

WITH reference (*antea*, p. 96) to occurrences of eggs of the Cuckoo (*C. c. canorus*) in nests of the Tree-Sparrow (*P. m.*

montanus) in the British Islands, it may be of interest to state that my small series of Cuckoo's eggs includes a very typical example with a clutch of three eggs of the Tree-Sparrow (all similar), so that the "odd" egg (if any, and the clutch consisted of four only) must have been abstracted by the Cuckoo when she inserted her own in the nest, though occasionally there is no "odd" egg in a clutch—even if of six—either of Tree- or of the House-Sparrow (*P. d. domesticus*).

The set was taken from a hole in a pollard oak about six feet from the ground on June 19th, 1911, at Banham, Norfolk, by the same Mr. L. W. Leader to whom reference has been made. In connection with the incident, Mr. Leader writes, under date March 29th, 1917: "I had taken several lots of Tree-Sparrow's from the pollards, but never before or since with Cuckoo."

Considering the lapse of time between the laying of this Cuckoo's egg and of that exhibited at the meeting of the B.O.C. on June 9th last, it is hardly likely that the two eggs would be from the same bird, though possibly that collected on May 30th, 1918, might well be from a descendant of the layer of the first egg, whose proclivities for victimizing the Tree-Sparrow have surely been transmitted to her offspring, the latter very naturally returning for the breeding-season to the district where, possibly by similar foster-parents, born and reared.

J. M. GOODALL.

[In Mr. H. Massey's collection are two sets of Cuckoo with Tree-Sparrow's. One, from the Field collection, was exhibited at the British Ornithologists' Club in 1906 (*cf. antea*, p. 96); the other was taken in Pomerania in 1904, and was obtained from Mr. Ramberg.—F.C.R.J.]

SHOVELERS IN SURREY IN SUMMER.

WHILE out with some members of the London Natural History Society on July 25th, 1920, I observed several Shovelers (*Spatula clypeata*) on one of the lakes on Puttenham Common, Surrey.

Occurrences of this species in this county, especially in summer, appear to be unusual. Bucknill says: "A rare winter visitor which has only been recorded in the county on a few occasions, and in the *Geographical Bibliography*, one has to go back to 1905 to find a reference to the species.

WILLIAM E. GLEGG.

BIRDS AT NORTH WORCESTERSHIRE RESERVOIRS.

THE following observations made during the season 1919-20 on two large reservoirs in north Worcestershire may be

worthy of record. The reservoirs are situated nearly twenty miles to the east of the Severn valley, and a dozen miles west of the Avon. They are, in fact, on the high ground of the Avon and Trent watershed.

The first visit I paid was on September 30th, 1919, when I saw two Green Sandpipers (*Tringa ochropus*) and a Dunlin (*Erolia alpina*), besides commoner birds. On October 5th I again saw one Green Sandpiper. My next visit was on November 21st, when the most interesting bird present was a Slavonian Grebe (*Podiceps auritus*), which allowed me to approach near enough for satisfactory identification. On December 13th I again saw the Green Sandpipers and the Dunlin, which had, I suppose, been in the neighbourhood since September 30th. On this occasion, while I was at the upper reservoir, a Sheld-Duck (*T. tadorna*) arrived and flew round very wildly, settling on the water twice, and then apparently going away again in a southerly direction.

I did not see anything exceptional on January 22nd, February 5th, February 25th, or March 19th, 1920, though a single Black-headed Gull (*L. ridibundus*) on February 5th may be worth mentioning. This bird passed on northwards while I was at the reservoir.

In April I visited one or both of the reservoirs on the 12th, 18th, 22nd and 29th, and saw two Common Gulls (*L. canus*) passing northwards on the last of these dates. On May 1st my brother, W. B. Alexander, accompanied me to the reservoirs. On the upper reservoir we had excellent views of a party of seven Scoters, three pairs of the common species (*Oidemia nigra*), and a fine drake Velvet (*Oi. fusca*). These birds kept in a bunch together, and flew round several times. They did not appear to be feeding. On the same day, by the reservoirs, we saw altogether some twenty Common Sandpipers (*T. hypoleucus*), and one Ringed Plover (*Ch. hiaticula*). On a field near by were two Wheatears, almost certainly Greenland (*E. æ. leucorrhoa*), and about a mile from the reservoirs we saw five Lesser Black-backed Gulls (*L. fuscus*) circling over the Lickey hills and moving north-west.

Three days later all these unusual birds had disappeared, but we had the good fortune to see a beautiful male Pied Flycatcher (*M. h. hypoleuca*) by the Birmingham-Worcester Canal, quite near the reservoirs.

On May 11th a young Common Gull and a young Black-headed Gull arrived separately during my stay at the reservoir, and seemed soon to depart again in a north-westerly direction. On May 14th and 20th I saw no passing migrants.

It should be noted, I think, that I have never spent more than an hour at the upper reservoir, where almost all the birds here recorded have been seen ; and one or two of my visits have been of much shorter duration. So that, unless I have been peculiarly fortunate, the number of Gulls, at any rate, that pay hurried visits to the reservoirs on migration in spring must be quite considerable. Owing to the heavy rains during the spring the reservoirs were very full, so that there was little ground suitable for waders. Common Sandpipers probably nest by the reservoirs every year, and Ringed Plovers, I understand, have been known to do so ; but this year the only bird of the latter species that I saw was the one already noted on May 1st.

It may be worth adding that the immediate vicinity of the reservoirs serves to attract early passing migrants : my first Redstart (*Ph. ph. phœnicurus*), Whitethroat (*S. c. communis*), Whinchat (*S. r. rubetra*), and Sedge-Warbler (*A. schœnobæus*) of the season were all in the hedges or bushes round their sides ; and, of course, Hirundines arrived at the reservoirs weeks before they appeared at their breeding-places.

These reservoirs have been visited in past years by several ornithologists, but I cannot hear of previous records of Green Sandpiper, Slavonian Grebe, Sheld-Duck, or either of the Scoters.

H. G. ALEXANDER.

COMMON BUZZARD IN SUSSEX.—Prof. Kennedy Orton writes that he saw a *Buteo b. buteo*, a male by its size and probably adult, near Seaford, on February 25th, 26th and 28th, and March 8th and again on the 12th, near Lewes.

WOOD-PIGEON'S NEST WITH THREE EGGS.—Mr. G. T. Atchison writes that on September 4th, 1920, he found a nest of *C. p. palumbus* near Sharperton, Northumberland, containing three fertile, partly incubated eggs. These were all slightly smaller than the average, and identical in size and shape, and so doubtless the product of one hen. The bird was sitting when the nest was found.

SANDWICH TERN BREEDING IN CO. GALWAY.—With reference to the note on this subject (Vol. XI., p. 142), Lt. H. B. Cobb informs us that at least four pairs of *Sterna s. sandvicensis* bred on Mutton Island in 1920. He found two nests himself on May 19th, and was shown an egg from a third a fortnight later, a fourth nest being subsequently found.

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THE BLACK TERN.

BY

E. L. TURNER, H.M.B.O.U

I PUT up a tent before the nest of a Black Tern (*Hydrochelidon n. nigra*) on May 21st, and went straight into it. This is contrary to my usual custom, as it is generally a waste of time. But it rained and there was no other shelter on the flats.



BLACK TERN.

Covered with rain-drops.

(Photographed by E. L. Turner.)

However, although the bird had only been sitting a day or two, she returned at once, I made an exposure and she flew away. She would not come back, though her mate tried to drive her down after the manner of male Terns in general. They are often very irate if the females are shy of the camera, though not often willing to face the danger themselves. At last both birds alighted a few yards from the nest, sidled up near it, craned their necks and peeped at the tent. They squawked a good deal. It looked as if the

hen had induced the cock to come and see for himself that there really was cause for anxiety and that it was not a case of mere feminine nerves. They flew away, and so I left them. They followed me until I reached the high road, and one bird immediately went back to the nest. I felt vexed with them, as it turned out a glorious day after all, and I had nothing else to do. However, I wanted them to sit tight as I had a chance to try again later on.



BLACK TERN.

The male about to brood.

(Photographed by E. L. Turner.)

Eight days later I returned to the same spot. The Terns were then inured to the tent and gave me no trouble. But that day persisted in being dull and wet. An intermittent drizzle fell most of the time. This, of course, induced the bird to sit tight and I could get no photographs showing movement. However, I was quite happy watching her. Black Terns always fill me with a peculiar kind of joy. They are so beautiful. I have long been very familiar with them on the wing during migration, but I had never before been close to an adult bird in breeding dress. The black head and



BLACK TERN.

Alighting with airy grace.

(Photographed by E. L. Turner.)

breast have a wonderful sheen upon them. The rest of the plumage, when the bird is still, looks like polished gun-metal. They are, in addition, exquisite in outline and every movement is full of dainty grace. About 10.30 (solar time) on this 29th May they changed places. The male had a blacker breast and no mottling on throat and chin; he had, however, a well-defined whitish line running from the base of the bill downwards. He only stayed about ten minutes, and this was



BLACK TERN.

Suspicious.

(Photographed by E. L. Turner.)

the only occasion during four days on which I saw him brood. He spent all his time flying to and fro over his mate, driving away Redshanks (*T. totanus*), Ruffs (*P. pugnax*), and other intruders. When he swooped low over the nest, she would look up and reply to his call with soft, low notes; these were accompanied by a little vibrating movement of her whole body.

The Black Terns upset all my preconceived notions of how and where they ought to nest. I saw no floating nests anywhere. They were nesting on heaps of cut litter in one

locality, and on Texel they nested with Redshanks, Reeves and Lapwings (*V. vanellus*) on the long narrow meadows between the dykes. There was no real nest—just a scrape lined with a very few bits of dead reed or grass ; in this the three eggs were laid. On Texel they did not seem to nest in colonies as other Terns do, there would be a few nests on one meadow and some on another. These “meadows” are narrow strips of rough herbage lying between dykes. This made it difficult to catch the young birds, and I failed to find them. As soon as you appeared the old birds gave the alarm and the young birds hid in the coarse grass. All day long the non-brooding birds flew to and fro over the dykes hawking for insects, and occasionally swooping down after fish.

Last August, when sailing on Hickling Broad, I saw a little flock of seven young Black Terns—birds of the year. They were very pale grey on the back, and had a very distinct dark ring part of the way round the neck. For the moment I wondered what they could be, then my mind went back to the long, lonely days spent with Black Terns in their own breeding areas.

Since they are less particular in their choice of a nesting-site than we have been led to suppose, there seems no reason why Black Terns should not return to nest with us ; they are common enough on the south and east coasts during migration. As Holland reclaims more and more of her wet lands, her vast number of birds must surely diminish or else seek fresh breeding places. Let us hope some of them will come to us.

SOME EARLY RECORDS OF THE CRANE IN KENT.

BY

N. F. TICEHURST, M.A., F.R.C.S.

I HAVE recently come across the following five early records of the Crane (*Megalornis g. grus*) in Kent. The first occurs in the Account Book of the Chamberlains of Lydd (1428-1485) of which a full transcription was published in 1911 by Mr. Arthur Finn in his *Records of Lydd*; the others are taken from the extracts of the Chamberlain's Accounts of New Romney (1384-1570) and the City of Canterbury (1393-1662), printed in the fifth and ninth reports of the Historical Manuscripts Commission, where they have apparently remained hidden for forty-five and thirty-seven years. These extracts unfortunately represent barely one-tenth of the whole accounts, so that it is only possible to speculate as to what and how many similar records may yet be hidden therein; there are also further Lydd Accounts awaiting publication.

Since, however, there is only one mention of the Crane in the latter during a period of fifty-seven years, and taking into consideration its high reputation as an article of diet, it can hardly have been a common bird in Romney Marsh at the end of the fifteenth century, though it was apparently numerous enough in Saxon times. There is perhaps some confirmation of this furnished by the context of the entry, which shows that the Jurats purchased the bird for their own consumption. It is the only instance in the Accounts of a payment for this purpose for anything other than fish, chickens or "wildfowl," there being but very few of the latter, while purchases of several species of birds for gifts to high officials of the Cinque Ports and others are very frequent. It is to this last category that the records from New Romney and Canterbury belong.

It may be objected that the word Crane was frequently used in those days to denote the Common Heron (*A. cinerea*). This was undoubtedly the case, particularly in Wales and Ireland, but we have no knowledge that it was ever so used in Kent; moreover, in so far as the Lydd Accounts at any rate are concerned, there are many mentions of the Heron, either under its own name or one of its well-known variants. The price paid for them, too, is higher than that paid for Herons, which varied from sixpence to ninepence, and agrees with that usually paid for Cranes in other early records.

The first two quotations are of course translated from the Latin, while the third and fourth are transcribed as written. The earliest is the one from Lydd, and the fourth the first of the Canterbury records.

1471-2. *Folio 118a.*

Itm paid for the dinner of the Bailiff and Jurats on the Hundred Day [<i>i.e.</i> Hundred Court]	.. .. .	2s.
Itm paid to Richard Hoghlet for one crane	... ..	10d.

1490-91.

Paid John Wardene for the crane that was given to Richard Gildeforth, Knight	16d.
---	---------	------

(Sir Richard Guldeford was Sheriff of Kent in 1494.)

1525-6.

Gevyne to one that went to Seyntmaricherche att that tyme for a crane, to be gevyne to my Lord Wardene	..	2d.
---	----	-----

(St. Marys, referred to in this quotation, lies some two miles north of New Romney.)

1520-21.

Friday in Christmas week, paied for ii. cranes gevyn and sent to Mr. Wode to Otford, then beyng Marchall of Graysyn	v.s. iiiid.
---	---------	-------------

The second Canterbury record belongs to the same year, but is not transcribed in the Report, its general sense only being given, to the effect that the city presented two Cranes and a Swan to John Hales on the marriage of his daughter.

RECOVERY OF MARKED BIRDS.

STARLING (*Sturnus v. vulgaris*).—82,251, ringed at Skelmorlie, Ayrshire, as an adult by Miss A. Blyth on January 27th, 1917. Caught at the same place December 28th, 1918, and released with the same ring. Found dead at the same place on December 23rd, 1919.

96,245, ringed at Cheadle, Staffordshire, as a nestling by Mr. J. R. B. Masefield, on May 23rd, 1920. Reported at Hackthorn, Lincoln, in August 1920 by Mr. C. M. Sharp.

LINNET (*Carduelis c. cannabina*).—GR. 24, ringed at Southport, Lancs., as a nestling by Mr. F. W. Holder, on May 20th, 1918. Reported at Tarleton, near Preston, Lancs., on August 15th, 1920, by Mr. T. Summers.

CHAFFINCH (*Fringilla c. cælebs*).—GX. 5, ringed at Petersfield, Hants., as a nestling by Mr. F. E. Blagg, on May 25th, 1918. Reported near Petersfield, on April 18th, 1920, by Mrs. Stevens.

KR. 79, ringed at Torrance, Stirlingshire, as a young bird by Mr. J. Bartholomew, on June 22nd, 1919. Reported at Balmore, Stirling, on July 20th, 1920, by Mr. W. Rennie.

BLACKBIRD (*Turdus m. merula*).—91,030, ringed at Lytham, Lancs., as a young bird by Dr. H. J. Moon, on April 27th, 1918. Reported at the same place on June 21st, 1920, by Mr. J. A. S. Fair.

45,428, ringed at Sutton Coldfield, Warwickshire, as a nestling by Miss B. A. Carter, on June 8th, 1917. Reported at the same place on June 9th, 1920, by Mr. W. P. Walker.

86,611, ringed at Great Crosby, Lancs., as a nestling by Mr. J. Appleby, on May 16th, 1916. Reported at the same place on May 11th, 1920.

84,985, ringed at Barnard Castle, Durham, as a nestling by Mr. Bentley Beetham, on May 22nd, 1916. Reported at the same place on December 28th, 1916, by Mr. E. Smith.

91,257, ringed near Shrewsbury, Shropshire, as a bird of the year by Mr. A. Mayall, on July 26th, 1917. Reported at the same place on July 3rd, 1920, by Mr. H. W. Johnson.

SONG-THRUSH (*T. ph. clarkei*).—95,832, ringed at Fairhill, Tonbridge, as a nestling by Miss V. Buxton, on May 20th,

1919. Reported at Westerham, Kent, on February 17th, 1920, by Mr. J. R. Taylor.
- REDBREAST (*Erithacus r. melophilus*).—FY. 63, ringed at Cheadle, Staffs., as an adult by Mr. J. R. B. Masefield, on February 10th, 1919. Reported at the same place on May 5th, 1920.
- FS. 26, ringed at Bardowie Castle, Stirlingshire, as a young bird by Mr. J. A. Anderson, on May 12th, 1918. Reported at the same place on April 2nd, 1920, by Mr. J. Cameron, per the Editor of *Cage Birds*.
- HEDGE-SPARROW (*Prunella m. occidentalis*).—FY. 71, FY. 81, ringed at Cheadle, Staffs., as adults by Mr. J. R. B. Masefield, on February 25th and May 6th, 1919. Reported at the same place on May 5th and April 5th, 1920. Ring FY. 81 replaced and bird released.
- SWALLOW (*Hirundo r. rustica*).—KR. 87, ringed at Torrance, Stirlingshire, as a young bird by Mr. J. Bartholomew, on June 27th, 1919. Reported at Knockdhu, Lake Chrissie, South Africa, in February 1920 by Major J. W. H. Seppings. Published in *Cape Times*, February 26th, 1920. (*See Brit. B.*, XIV., p. 42.)
- MERLIN (*Falco c. aesalon*).—63,889, ringed at Blackstone Edge, Lancs., as a nestling by Captain A. W. Boyd, on June 22nd, 1919. Reported at Delph, Yorkshire, end September 1920 by Mr. E. Butterworth.
- BUZZARD (*Buteo b. buteo*).—50,541, ringed in Westmorland, as a nestling by Mr. H. W. Robinson, on June 12th, 1917. Reported near the same place in May 1920 by Mr. T. Metcalfe.
- SHOVELER (*Spatula clypeata*).—37,070, ringed at Southport, Lancs., as a nestling by Mr. F. W. Holder, on May 31st, 1917. Caught in duck decoy at Overijssel, Holland, on January 15th, 1920. Reported by Mr. A. B. Wigman.
- 36,718, ringed at Middleton Hall, Tamworth, Warwickshire, as an adult by Mr. E. de Hamel, on January 16th, 1915. Reported near Lögstor, Jutland, Denmark, on August 7th, 1920, by Mr. G. Bendtzen.
- CORMORANT (*Phalacrocorax carbo*).—101,808, ringed at Castle Loch, Mochrum, Wigtownshire, as a nestling by Mr. J. G. Gordon, on June 14th, 1919. Reported at Eastriggs, Dumfriesshire, on June 27th, 1920, by Mr. T. Chapelhow.
- 101,588, 103,062, ringed in the Summer Isles, Ross., as young birds by Mr. D. A. J. Buxton, on July 21st and 25th, 1919. Reported at Lochbroom, Ross-shire, on July 27th, by Mr. J. McLeod, and east side of the Isle

of Colonsay, Argyllshire, on January 14th, 1920, by Mr. J. McAllister.

WOOD-PIGEON (*Columba p. palumbus*).—67,401, ringed at Lawford, Warwickshire, as a nestling by Mr. A. C. Greg, on June 27th, 1918. Reported at Rugby, in January 1920 by Mr. G. W. Wade.

26,086, ringed at Torrance, Stirlingshire, as a nestling by Mr. J. Bartholomew, on April 30th, 1919. Reported at Buchanan Castle, Drymen, Glasgow, on January 27th, 1920, by Mr. R. Stewart.

LAPWING (*Vanellus vanellus*).—45,286, ringed at Newark Hill, near Ayr, as a fledgeling by Miss N. H. Greg, on June 6th, 1914. Reported at Athy, co. Kildare, on November 16th, 1919, by Mr. R. Hannon.

47,858, ringed at York as a nestling by the late Captain C. H. T. Whitehead, on June 7th, 1914. Reported at Athy, co. Kildare, about December 1917.

94,488, ringed at Kinloch, Rannoch, as a fledgeling by Mrs. T. E. Hodgkin, on 15th June, 1919. Reported at the same place on August 19th, 1920, by Mr. K. M. Chance.

WOODCOCK (*Scolopax rusticola*).—2881, ringed at Balmaclellan, Kirkcudbrightshire, as a young bird by Mr. R. Stewart, gamekeeper to Mr. R. Shepley Shepley, on June 7th, 1918. Reported in co. Westmeath, Ireland, on January 6th, 1920, by Mr. Hamilton Murray.

BLACK-HEADED GULL (*Larus ridibundus*).—61,743, ringed at Ravenglass, Cumberland, as a young bird by Mr. H. W. Robinson, on June 10th, 1913. Reported about one mile from Ravenglass gullery, on April 30th, 1920, by Mr. J. T. Gray.

LESSER BLACK-BACKED GULL (*Larus f. affinis*).—31,400, 34,358, 39,061, ringed in Westmorland, as young birds by Mr. H. W. Robinson, on July 1st, 1911, July 6th, 1915, and July 30th, 1920. Reported near Hawes, Wensleydale, Yorks., on April 27th, 1920, Préfailles (Loire Inférieure), France, on August 4th, 1920, and Karmöen, near Haugesund, west coast of Norway, in September 1920 by Mr. J. W. Astley, M. Moraillon and Mr. P. Valvik.

NOTES

LATE NESTING OF THE CIRL BUNTING IN SOMERSET.

A NEST of the Cirle Bunting (*Emberiza cirrus*) that I had under observation near Martock, contained three eggs on August 25th, 1920. This was the complete clutch. The usual number in this district is four, but I have found five, though the latter number is rather uncommon.

JOSEPH H. SYMES.

[It may be considered almost as the normal habit of this species to breed as late as August in the south-western counties of England, where it is probable that three broods are reared annually. Incubated eggs have been found in the nest in Dorset as late as September 6th, and young in down on September 15th, 1910, in Somerset, by Mr. H. W. Mapleton, cf. *British Birds*, Vol. III., pp. 125 and 195.—F. C. R. JOURDAIN.]

WOOD-LARKS IN MONTGOMERYSHIRE.

EARLY in September 1919 I twice met family parties of Wood-Larks (*Lullula a. arborea*) in Montgomeryshire. The first occasion was about 15 miles west of Welshpool, and the second near Newtown. I have no doubt they breed in this county on the bracken-covered hillsides which abound, and I hope to make certain next year by finding a nest.

W. M. CONGREVE.

LATE NESTING OF SPOTTED FLYCATCHER.

WITH reference to Mr. Musselwhite's note (*antea*, p. 116) on this subject, it will perhaps be of interest to record that on August 29th, 1920, I saw at Godstone, Surrey, a pair of Spotted Flycatchers (*Muscicapa s. striata*) feeding two young birds in very mottled plumage, and which had probably not left the nest more than a week before my observation was made.

HOWARD BENTHAM.

SEDGE-WARBLER BREEDING AT UNUSUAL HEIGHT.

ON May 23rd last I found a nest of a Sedge-Warbler (*Acrocephalus schænobæus*) in a thick thorn hedge on West Sedgemoor, in Somerset, at the unusual height of 7 feet from

the ground. The hedge was quite close to water, and I had no difficulty in identifying the nest, although I failed to see the bird. These birds breed in great numbers in this locality. The clutch of five eggs also aided identification.

C. J. PRING.

[Nests of this species are not infrequently found in hedge-rows at considerable heights. H. E. Forrest (*V. Fauna of N. Wales*, p. 97) records one in a hedge in Anglesey, quite 10 feet above the ground, and in South Derbyshire I met with several nests at heights varying from 4 feet 6 inches to 6 feet from the ground.—F. C. R. JOURDAIN.]

UNUSUAL SITE FOR SEDGE-WARBLE'S NEST.

ON June 23rd, 1920, while wading among reeds at Tuamgraney, Lough Derg, Ireland, I came across a nest suspended from the reeds at least four feet above the water level. It contained five eggs, one of which I sent up to the office of *British Birds* for identification. Mr. Jourdain states that it is a typical egg of the Sedge-Warbler (*Acrocephalus schænobænus*), and that no Reed-Warbler's egg has hitherto been known to resemble this type. The nest was also peculiar in having many feathers in it, some loose and others woven into the nest.

P. G. KENNEDY.

LESSER WHITETHROATS IN DEVON.

PERHAPS I may be allowed to supplement Mr. Backhouse's note (*antea*, p. 117) regarding the status of the Lesser White-throat (*S. c. curruca*) in Devon, by saying that it is a regular visitor to the Budleigh Salterton district. It may be looked for in the fourth week of April, and I know of at least three pairs that have frequented the same spots during the last six summers, though I have not looked for their nests.

W. WALMESLEY WHITE.

YOUNG CUCKOO FED BY SONG-THRUSH.

ON May 26th, 1920, on the road that runs past Dyserth Fall, N. Wales, I glanced over a low wall and saw a Song-Thrush (*Turdus ph. clarkei*) in the act of feeding a young Cuckoo (*Cuculus c. canorus*). The Thrush was so preoccupied that for an instant it did not notice me, but upon doing so, flew off with much loud complaining. The fledgeling merely floundered away into the long grass, revealing the white spot on its nape, which finally dispelled my doubts as to its identity. The next day, I again saw the two birds at the same place,

but on this occasion the Cuckoo was perched on a branch of a chestnut tree about five feet from the ground, with no branches below it. The foster-parent took no notice of me, but regularly at intervals of two and a half minutes (once she was away for five minutes) brought what looked like one of the fat, whitish larvæ so often turned up by the spade at that time of year, and inserted it into the widely-opened beak of the waiting Cuckoo.

As I left the district the next day I was unable to continue my observations, but the date seems rather early for a young Cuckoo to be so far advanced. Though I never actually saw the bird fly, I presume it must have flown to the place where I saw it on the 27th. During all the time I had the birds under observation I did not once hear the Cuckoo actually make any chirrup or other noise.

J. M. McTEAR.

[Records of Cuckoos being fed by fosterers do not afford actual proof that the former were reared by the latter, though strongly presumptive.—EDS.]

CUCKOO'S EGGS AND NESTLINGS, 1920.

THIS year Cuckoos (*Cuculus c. canorus*) were generally far less abundant around Felsted than usual; in one or two small districts they were more plentiful than I have previously noticed them. They had obviously begun to lay by May 13th, though no egg was found until May 14th, when one was found in a Robin's nest. On one occasion I was fortunate enough to find a Robin's nest with two Cuckoo's eggs and four Robin's eggs. On another occasion while cycling along a lane I turned a sharp corner and almost ran into a Cuckoo standing on the edge of a Hedge-Sparrow's nest, holding an egg in the bill, with which she flew away. As there was only a Hedge-Sparrow's egg in the nest, she was probably in the act of depositing her own egg when I flushed her. When I revisited the nest in the evening a Cuckoo's egg was in the nest together with the Hedge-Sparrow's egg. The incident happened at noon (normal time). The usual depositing time is between 3 and 5 p.m.

A Cuckoo deposited an egg in a Wren's nest in a garden at Braintree and the young Cuckoo was successfully reared by the Wrens. The feeding afforded great interest and amusement to the owners of the garden.

In all sixteen cases were noted, the birds victimized being: Hedge-Sparrow 7, Robin 3 (or four counting the two eggs in one nest separately), Pied Wagtail 3, Wren 1, Tree-Pipit 1.

In one case the three Robin's eggs and the Cuckoo's egg

were all infertile, perhaps because the nest was very exposed and the sun may have affected the eggs while the bird was away.

Of the eight nestlings kept under observation only one failed to leave the nest ; most of the others were seen in the neighbourhood of their birthplaces for some three weeks after they could fly. This is the highest percentage I have known to survive the nestling period since I kept notes on the subject.

J. H. OWEN.

LITTLE OWL IN CARNARVONSHIRE.

ON October 10th, 1920, I watched a Little Owl (*Athene noctua mira*) on the Great Orme's Head. When first seen it was standing erect on a low wall near the lighthouse, but as I approached it, it flew across the roadway on to a stone at the mouth of a hole at the base of a cliff. Here I had a splendid view of it with my glasses. Its flat, speckled head, prominent white eye-stripes, narrow white half-collar over one of brown, white round spots on the chocolate-brown wing-feathers, the bright, lemon irides, and the short white hairs covering its legs left me in no doubt as to the species. Upon my stepping nearer, it flew back on to the wall, remained there a few seconds, and then up into a crevice in the cliff some thirty feet above the road, where I had further excellent views of it. This apparently is the only definite record of its occurrence in Carnarvonshire.

RICHARD W. JONES.

KESTRELS ATTACKING BATS.

ON the evening of September 13th, 1920, the sun having just set, I was on my way to a certain rocky headland in Alderney. Whilst traversing a gorge, having on one side an almost vertical wall, and watching a bat (*V. pipistrellus*) passing to and fro and hawking for moths in its usual manner, I was surprised to see a Kestrel (*F. t. tinnunculus*) sail out from the side of the cliff and attack the bat. There was a mix-up for perhaps a second or two, the bat emitted a squeak, and then both made off in opposite directions—my presence doubtless preventing a tragedy. The sky against which both appeared when away from the cliff-side was particularly clear and there could be no mistake, either as to the identity of the Hawk or its intention, and I was only three or four yards away at the time. Yarrell, quoting a correspondent of Selby's, relates how late in the evening a Kestrel was seen to prey upon a large swarm of cockchafers, so that it is

evident that the Kestrel occasionally hawks late in the evening, but I do not think it can be a common habit.

W. R. THOMPSON.

ALTHOUGH bats are certainly not commonly taken by the Kestrel, there are at least three records of these birds killing bats of two species. On March 26th, 1910, a pipistrelle was captured which had been disturbed from a tree-trunk about noon at Cassilis, in Ayrshire (*Glasgow Nat.*, Vol. II., p. 137; cf. *British Birds*, IV., p. 222). A still more remarkable instance is that recorded in the *Zoologist*, 1890, p. 107, where a Kestrel, after a long chase about midday on November 15th, 1889, captured a noctule or great bat in Surrey. It will be noted that unlike the case described by Mr. Thompson, both these attacks were made in broad daylight, presumably on bats which had been disturbed from their sleeping places.

The third instance took place about 5 p.m. on October 12th, 1912, in Salop, and is recorded by Mr. H. E. Forrest in *Brit. Birds*, VI., p. 189. In this case a pipistrelle was caught and devoured.

F. C. R. JOURDAIN.

KESTREL CAPTURING A SWIFT.

ON August 8th, 1920, at 6 a.m. solar time, I was awakened by the screaming of a young Kestrel (*F. t. tinnunculus*). I looked out of my cabin door (in Norfolk) and saw two Kestrels, an adult female and an immature bird. They were hovering over a marsh opposite me and a cloud of Swifts (*A. a. apus*) were circling in the air. Suddenly the old Kestrel struck at and seized one of the Swifts. Both Kestrels then flew towards my island and passed close to my cabin window. They were flying low, only just clear of the ground, and would have alighted but they caught sight of me and passed on. There were two of us watching them and we both saw the Swift in the Kestrel's grip. It was held parallel with the Kestrel's body, the wings were neatly folded, and from the size and colour of the Swift I have no doubt that it was a mature bird.

E. L. TURNER.

BUZZARDS IN HERTFORDSHIRE.

ON the morning of October 8th, 1920, at 9.45, a pair of Common Buzzards (*Buteo b. buteo*) were circling at a considerable height over my house at Barnet, south-east Herts. I only observed them for a minute or two and then they made off in a south-westerly direction.

H. KIRKE SWANN.

NOTES ON A FLOCK OF GLOSSY IBISES IN
CORNWALL.

A LITTLE after midday on September 19th, 1920, while sitting on St. Michael's Mount, I saw a line of ten black long-necked birds fly from the east over Marazion (about half a mile away) and drop down to the Marazion Marsh, which forms a triangle between the high road and the railway; on reaching this marsh, I saw at once that the flock consisted of ten Glossy Ibises (*Plegadis f. falcinellus*), a bird I had previously seen in Egypt only.

On this and the following day I had excellent opportunities



FLOCK OF GLOSSY IBISES IN CORNWALL.
(Photographed by A. W. Boyd.)

of watching them. The marsh has running across it several large banks and ditches, and it was possible to crawl under cover of these to within a few yards of the birds and to watch them at close quarters. Their tameness was remarkable for birds of their size, and there were numbers of occasions when they could be observed at distances of from eight to thirty yards, long after other birds—Curlews, Herons, Ducks, etc.—had flown away.

They fed almost incessantly, usually in some wet part of the marsh in a few inches of water; on the first day they kept in a close flock, but on the second were rather more scattered.

Sometimes one alone would rise and fly for a few yards in a

peculiarly buoyant manner, but before all flew, one bird stood quite upright and gave a harsh grating call—"gra-a-k"—and then the flock would rise and fly off to another part of the marsh (never more than 150 to 200 yards away) giving the same call several times in succession. On one occasion I was close to a bird which gave this call quite gently; it opened its bill and called "ra-a-k," with the "r" as an aspirate, as if drawing in its breath.

They were most diligent feeders, but only once, when something white was pulled out of the water, did I see anything large eaten; the bird that pulled it out hopped clumsily out of reach of the others to the grass before eating it.

In size they differed noticeably: four or five of them were distinctly larger than the rest, and the largest seemed to be the one that usually gave the alarm.

In plumage they did not differ greatly, having the head and neck of ruddy brown and back and wings of iridescent green with a purplish-red tinge in places; but the heads of two (one in particular) were much lighter than those of the others, being yellowish-mottled and quite noticeable as they all fed together. Their long decurved bills usually had a pale glistening appearance, particularly when seen from a distance.

Their remarkable appearance, especially in flight, and their tameness will probably prove fatal to most of them if they stay long; but on October 1st, as I passed the marsh in a train, I saw that there were still at least two feeding there.

A. W. BOYR.

GLOSSY IBIS IN SOUTH DEVON.

ON September 24th, 1920, I had a fine view of a Glossy Ibis (*Plegadis f. falcinellus*) in immature plumage on the Exe estuary near Dawlish Warren. It was first seen in the distance as a large black bird, somewhat resembling a Cormorant in flight, but on passing overhead its identity was obvious. As it approached the mud-flats the rapid wing-beats stopped, and the bird planed gently down, settling, near some Black-headed Gulls (*L. r. ridibundus*), and starting to feed. In a moment or two the Gulls began to mob the Ibis, which at once rose, and flew to a distant mud-bank, too far away for a clear view even through binoculars. There appear to be about a dozen previous records of this bird for Devon.

W. WALMESLEY WHITE.

ON September 23rd, 1920, I had a good view of a Glossy Ibis feeding along the Exe estuary between Topsham and Turf. On the 27th it was unfortunately shot at the former

place, and has been given to the Albert Memorial Museum, Exeter.

T. P. BACKHOUSE.

GLOSSY IBIS IN HEREFORDSHIRE.

I HAVE seen at a Shrewsbury taxidermist's an immature Glossy Ibis which was shot on the morning of September 2nd, 1920, by Mr. Bernard Carrodus at Castle-End, Lea, near Ross-on-Wye. The species is new to the Herefordshire avifauna.

H. E. FORREST.

[Mr. E. Cambridge Phillips (*Vict. Hist. of Hereford*, I., p. 140) records one shot about the third week of December 1902, at Winforton, and a second bird is said to have been seen in the neighbourhood. The above record is therefore the second definite occurrence.—F.C.R.J.]

BUCKINGHAMSHIRE HERONRIES.

IN the recently published work on *The Birds of Buckinghamshire and the Tring Reservoirs*, by Hartert and Jourdain, it is stated that Mr. E. Hollis discovered a heronry of about a dozen nests near Gayhurst, in March 1919. The following additional information has been kindly supplied to me by Mr. Carlisle, the owner of Gayhurst. He says that Herons (*Ardea c. cinerea*) have bred at this heronry to his personal knowledge for forty years and he understands that Gayhurst Wood has been occupied by them for certainly not less than one hundred years. There are twenty-five to thirty nests, all in oak trees. When the ground gets foul, which occurs about once in ten years, they move a short distance to another part of the same wood.

HENRY L. COCHRANE.

BITTERN IN SURREY.

ON February 14th, 1919, I was shown a Common Bittern (*B. stellaris*) which had been shot the previous day—in error—near Cranleigh Village. I was told that for some nights before this an “unearthly” noise had been heard.

ALEX. HOPE WALKER.

SHOVELERS IN SURREY.

I CAN fully endorse Mr. W. E. Glegg's remark (*antea*, p. 118) on the unusual appearance of the Shoveler (*Spatula clypeata*) in Surrey during the summer. From observations extending over a number of years, I find that all my records are for the months of March, April, October and November.

Perhaps the details of my own notes tabulated below will be of interest.

1905. April 19th.—A pair observed on Hedgecourt Pond in S.E. Surrey.

1910. April 10th.—Two drakes and four ducks seen at Godstone.

1913. November 30th.—One female on Hedgecourt Pond.

1914. October 4th.—Two males and one female at Hedgecourt, two drakes at the same place on October 18th, and a pair on November 28th.

1915. March 6th.—One drake on Frensham Little Pond.

1920. March 13th.—A pair observed at Frensham Little Pond.

I should perhaps mention that during the years 1916-7-8, I was prevented from visiting any of the Surrey lakes from which the above records were obtained.

HOWARD BENTHAM.

MANX SHEARWATER IN STAFFORDSHIRE.

A MALE Manx Shearwater (*Puffinus p. puffinus*) was brought to me for identification on September 24th, 1920, having been found alive the day before in the mouth of a rabbit-hole, near Tean, Staffordshire. The bird died soon after it was picked up, and on dissection proved to have been shot at and wounded. The stomach contained only a very little food, which consisted of fragments of a small marine crustacean and a few minute bits of seaweed (*fucus*). This appears to be the ninth recorded instance of this species having been found in Staffordshire. All former occurrences, except one in June 1904, were met with *early* in September, the present instance being the latest in date. This is, no doubt, accounted for by the bird being wounded and delayed for some days before it was found. The general date of the southward autumnal migration of the Manx Shearwater from the west coasts of England and Scotland appears to range from the last week in August to the first week in September.

JOHN R. B. MASEFIELD.

[There are at least twelve definitely recorded instances of the occurrence of the Manx Shearwater in Staffordshire besides that given above. The June record mentioned by Mr. Masefield did not take place in 1904, but in 1894. (This error also occurs in Mr. Masefield's paper in the *Vict. Hist. of the Co., Stafford., I.*, p. 161.) There is also a note of one killed on August 30th, 1908, in the *Rep. N. Staffs. Fd. Club*, 1909-10, p. 111, and another was picked up by a dog on August 27th, 1917 (*op. cit.*, 1917-18, p. 115).—F. C. R. JOURDAIN.]

COMMON SANDPIPERS IN DORSET.

WITH reference to Major Thompson's interesting note (p. 95) on this species, I may state that when spending a few days near Portland Bill at the end of April 1919, Dr. F. G. Penrose and I constantly noted Common Sandpipers (*T. hypoleuca*), newly arrived and evidently passage-migrants. Two were seen on the rocks near the Bill on April 29th and six or seven tired looking birds in the same place the next day. On May 1st there was a distinct increase, seventeen being seen together, and others were about, but on May 2nd only seven or eight were noticed, so some had evidently passed on. I have often thought that Alderney and "the Isle of Portland" were important stepping-stones for migrants to and from Dorset, and these observations on this species lend weight to the theory.

F. L. BLATHWAYT.

WOOD-SANDPIPERS INLAND IN LINCOLNSHIRE.

ON September 11th, 1920, I saw three Wood-Sandpipers (*T. glareola*) by the side of the Welland, about three miles to the east of Stamford. They rose together from a weed-grown "drain," and their soft, rather sibilant, whistling struck quite a pleasing and musical note as they circled round.

It may be of interest to recall that a few years ago I recorded (*Zoologist*, 1911, p. 432) the appearance of three birds near Sleaford, in August, which were believed to be of this species.

GEORGE BOLAM.

BLACK-TAILED GODWIT IN SOUTH DEVON.

AN immature Black-tailed Godwit (*Limosa limosa*) appeared on the shore near Budleigh Salterton, on September 16th, 1920, in company with a couple of Whimbrel (*N. p. phaeopus*). I watched it for half an hour as it fed among the seaweed and tide-drift, and was able to notice clearly the many points of difference between this bird and the Bar-tailed species (*L. l. lapponica*), which is a fairly regular passage-migrant on this part of the coast.

W. WALMESLEY WHITE.

BLACK TERN IN LANCASHIRE.

ON May 28th, 1920, a Black Tern (*Hydrochelidon n. nigra*) arrived on Marton Mere (near Blackpool) and I watched it daily until June 4th, when it took its departure. It spent the evenings hawking for insects, a few feet above the tops of the reed-beds, and rarely took anything from the water.

R. A. H. COOMBS.

SOME RECENT RECORDS OF IRISH BIRDS.

THE following, although probably far from exhaustive, is a list of records of rare and interesting Irish birds since the end of 1917, compiled from the *Irish Naturalist* and my own private notes. It is hoped that it may prove useful to those who would wish to keep their records of Irish birds up to date, as it is additional to the records that have already been published in *British Birds*.

IRISH JAY (*Garrulus glandarius hibernicus*).—The first record for co. Longford, namely, one at Currygrane, is reported in the *Irish Naturalist* for December 1918, p. 174. A second occurrence is reported at Cloonshannah on May 5th, 1918.

HOOPOE (*Upupa e. epops*).—One is reported captured at Innishowen, co. Donegal, on April 4th, 1919. (*Irish Nat.*, XXVIII., p. 93.)

HARRIER (? *Circus cyaneus*).—A bird which, from the description given, was in all probability of this species, was seen in the vicinity of Lismore, co. Waterford. I received this information in August 1918. As Lismore is not very far from the Knockmealdown Mountains, it seems possible that the bird had wandered from there.

WHOOPER SWAN (*Cygnus cygnus*).—In the *Irish Naturalist* for 1920 one is recorded which was shot in co. Down.

LEACH'S FORK-TAILED PETREL (*Oceanodroma leucorhoa*).—A female was killed striking the lantern at Slyne Head Lighthouse the third week in September 1920. This is an interesting record, since the late Mr. Barrington had no direct evidence of the migration of this species in September. (*Migration of Birds at Irish Lt. Stat.*, Analysis of Reports, p. 240.)

STOCK-DOVE (*Columba ænas*).—In Ussher and Warren's *Birds of Ireland* the range of the Stock-Dove is given as extending from Clare to Antrim. This bird has now spread to co. Galway.

TURTLE-DOVE (*Streptopelia t. turtur*).—An immature female was obtained by Mr. Sheridan at Dugort, Achill, on September 18th last; an addition to the avifauna of Achill.

BLACK-TAILED GODWIT (*Limosa limosa*).—For Mutton Island, co. Galway, I have the following records: March 12th and September 6th 1919. (Mr. John Glanville *in litt.*)

GLAUCOUS GULL (*Larus hyperboreus*).—Mr. May reports (*Irish Nat.*, 1919; p. 55), one having been seen at Sandymount, co. Dublin, about the end of January 1919.

ICELAND GULL (*Larus leucopterus*).—Mr. Glanville writes me that he observed Iceland Gulls on Mutton Island, co. Galway, on the following dates in 1919: January 4th, February 3rd, May 18th.

ARCTIC SKUA (*Stercorarius parasiticus*).—I am informed on good authority, that a bird of this species was seen pursuing a Tern between Lambay Island and Malahide, co. Dublin, in September 1920.

BUFFON'S SKUA (*Stercorarius longicaudus*).—I am informed of a specimen which was shot on the estuary of the Erne on October 15th or 16th, 1918. My informant states that two more were observed by a friend of his, on the shores of Lough Conn, co. Mayo, in August two or three years ago. (This would be August 1917 or 1918.)

QUAIL (*Coturnix c. coturnix*).—Two seen, of which one was shot, at Belcoo, co. Fermanagh, in November 1919. (Mr. C. J. Bayly *in litt.*)

ROBERT F. RUTTLEDGE.

COMBINED NEST OF SONG-THRUSH AND WREN.—Mr. J. H. Crow sends us a note of a joint nest of Song-Thrush (*Turdus ph. clarkei*) and Wren (*Troglodytes t. troglodytes*) built in a rose-bush trained against a wall at Clyffe, Dorset, in July 1918. The Thrush's nest was built on the top of the Wren's nest, but though the young Thrushes were reared the Wrens apparently deserted.

CUCKOO'S EGG IN NEST OF SONG-THRUSH.—Dr. W. Eagle Clarke (*Scott. Nat.*, 1920, p. 154) records an egg of the Cuckoo (*Cuculus c. canorus*) in May 1920 in a nest of the Song-Thrush (*Turdus ph. clarkei*) in the grounds of Scone Palace, Perthshire. The nest contained also two eggs of the rightful owner. The Song-Thrush is one of the uncommon fosterers, but has been recorded on about a dozen occasions from England.

CINNAMON COLOURED WREN IN SUSSEX.—Mr. A. L. Butler writes: Near Horsham, on Oct. 15th, 1920, I saw a very pretty variety of the Wren (*T. t. troglodytes*), of a uniform very pale cinnamon or rufous cream colour. The bird was out on an open stretch of heather, and I was able to flush it repeatedly and to watch it very closely.

REVIEW.

1. *Geographical Bibliography of British Ornithology from the earliest times to the end of 1918*. By W. H. Mullens, H. Kirke Swann, and Rev. F. C. R. Jourdain. Parts I. to VI. (at 6s. per part), Witherby & Co., 1919-20.

THIS *magnum opus*, to use a *cliché* which is often applied to works of far less magnitude and importance, is now complete, and we offer our hearty congratulations to those concerned in its publication. A review of the first part has already appeared in *British Birds* (Vol. XIII., pp. 222-3), and we note with satisfaction that, in the later parts, a key to the contents of each opening has been given on the head of every page; this improvement will greatly assist the reader in ready reference.

To indicate the vast labour which the authors have completed it may be mentioned that, for Norfolk alone, there are some 590 references (for which the Gurney family are responsible for no less than 74), and that the book runs, in all, to 558 pages.

In a work of this kind there are bound to be some errors and omissions, but these can only be discovered from time

to time. When dealing with Hampshire we expected to find mention of F. G. Aflalo's *Half a Century of Sport in Hampshire: being extracts from the shooting Journals of James Edward, second Earl of Malmesbury*: (The "Country Life" Library of Sport), 1905. As regards Dumfriesshire, some of the references given refer strictly to Kirkcudbright and to Cumberland, and the papers by Mr. Robert Service: "The Solitary Snipe in Solway District"; "Pied Flycatcher in Dumfriesshire" appeared in *Ann. Scott. N. H.*, 1897, p. 124 and p. 249, and not in *Nat. Chron.* Mr. R. Armstrong's note on "Pied Flycatcher in Mid-Nithsdale" is to be found in *Ann. Scott. N. H.*, 1898, p. 49; not in *Nat. Chron.* There is no mention of Mr. H. Goodchild's "Wild Birds about Hoddam Castle" (*Avic. Mag.*, Dec., 1909; pp. 52-8) nor of Mr. John Corrie's *Glencairn (Dumfriesshire) The Annals of an Inland Parish*, 1910, in which there is a list of local birds on pp. 180-5.

It may be regretted that the "addenda" on pp. 554-558, have not been printed on one side of the paper only, as was done in the case of *A Bibliography of British Ornithology*; this would have enabled these addenda to be cut up and inserted as slips in their appropriate places in the body of the book. It only remains to again congratulate the authors, and at the same time we express the most earnest hope that, since the Bibliography of British Ornithology has now been so faithfully dealt with up to date, periodical additions may from time to time be published. H.S.G.

LETTER.

BREEDING OF THE WOOD-LARK IN SOMERSET.

To the Editors of BRITISH BIRDS.

SIRS,—I thank Mr. Blathwayt for pointing out (*antea*, p. 116) that a wrong impression might be conveyed by my note (p. 91) on this subject, but I do not think there is cause for much anxiety.

I did not intend it to be a history of the distribution of the species, so said nothing of occurrences, nor of the results obtained from the considerable time I have spent in hunting for it. Like him, I have also received many reports of its presence dating back to 1883, and there is little doubt that it has bred for many years past; at the same time, I hope I am entitled to some credit for being the first during this long time to furnish any account of its breeding. At the last county ornithological meeting Mr. Blathwayt informed some of the members, including myself, that he had never found the nest in Somerset, but had done so in an adjacent county; from this we must infer that the four young described by him do *not* refer to Somerset. I mention this to avoid another wrong impression being left. The set of eggs taken twenty years ago and marked Somerset do not interest me very much.

CHEDDAR, SOMERSET.

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WITH WHICH WAS INCORPORATED IN JANUARY, 1917, "THE ZOOLOGIST."

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ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., AND NORMAN F.
TICEHURST, O.B.E., M.A., F.R.C.S., M.B.O.U.

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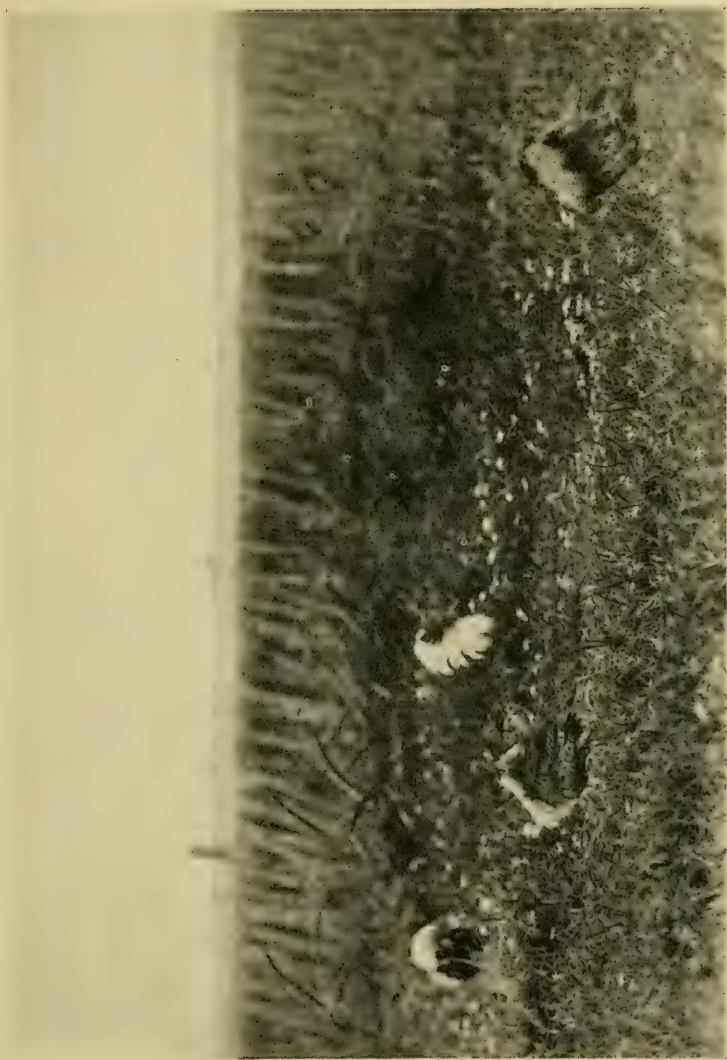
SOME NOTES ON THE RUFF.

BY

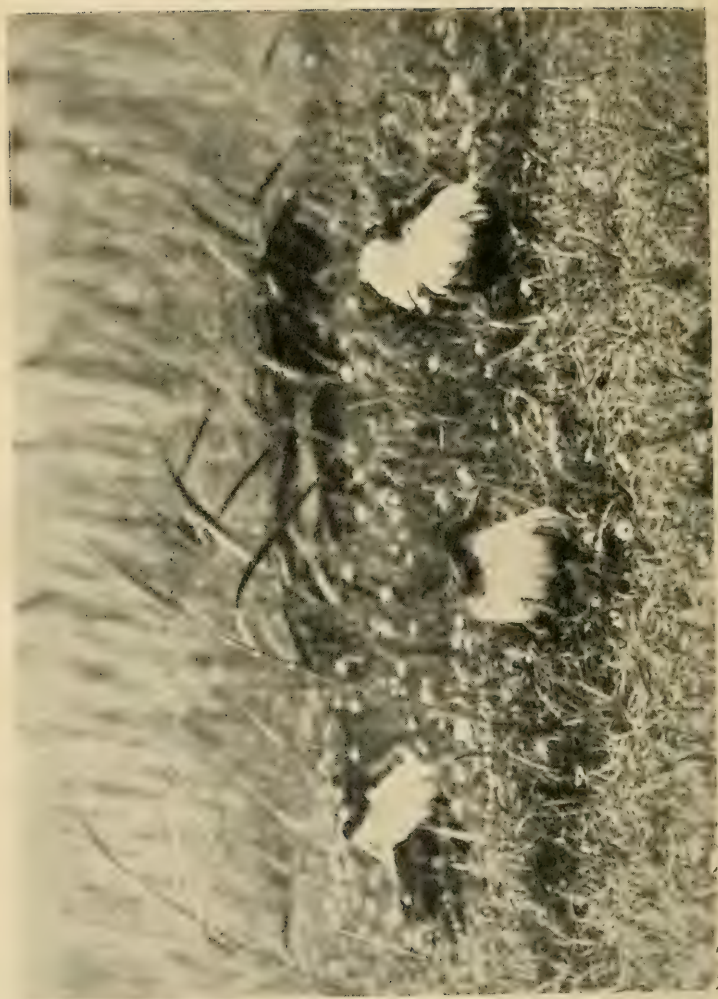
E. L. TURNER, Hon.M.B.C.U.

THESE photographs of the Ruff (*Philomachus pugnax*) were taken on one of their classic "hills" in Texel, between May 19th and 22nd, 1920; my observations extended over three weeks. This "hilling" ground was at the edge of a narrow meadow, separated from a cross-road by a dyke only. Sometimes the Ruffs played in this road, but there were always some to be seen on the meadow. By far the greater number of Ruffs assembled on the main road, where I have seen from forty to sixty at a time. Some would be dancing, others sleeping or fighting, on their hills on the grassy margins of the road; but many were always rushing about on the road itself. If you are cycling, they run aside to let you pass, and are back again to their old position almost before you can look round. If a cart passes, they give it rather a wider berth, and return to their absurd amusements the moment it has passed. They are more wary of people walking, and generally fly to the meadows before you are within fifty yards of them. I thought at first that it would be quite easy to stalk them with a camera on the open road, where they would have made good photographs, but they eluded me; so I put up a tent in the midst of them on the "hill" in the meadow. There were nine bare places within range of my camera, tenanted by as many Ruffs; as each bird's plumage is distinctive, I knew them all individually; each one usually resorted to his own special patch. The grass around this area was several inches high, and consequently the Ruffs do not show up as distinctly as they would have done by the roadside. Each little hill was about eighteen inches in diameter, and absolutely devoid of any vegetation. The Ruff is either as motionless as if he were carved in stone, or else he is vibrating like a toy on wires. It is the rapid, restless motion of the feet, and the dancing, which have worn down the grass and hardened the ground in these circular patches.

The birds paid no attention to my tent, although the wind was so strong one day I could hardly keep it up, and the canvas rattled and roared like a ship in a storm. As a matter of fact, Ruffs are supremely indifferent to anything except their own concerns. The wind seemed to excite them, for on that day they sparred a great deal, while the next day,



RUFFS: On the *qui vive*.
(Photographed by E. L. Turner.)



RUFFS: Preparing to waltz.
(Photographed by E. L. Turner.)

which was oppressive and thundery and very dull, the birds slept and were only intermittently active.

When excited, the Ruffs' movements are extremely rapid. They rush round with the regularity of a clockwork mouse. When several are fighting together, they are an indistinguishable whirr and blurr of feathers. I exposed six dozen plates in three days with only about ten satisfactory results, the rest show nothing but a smudge. But most of my time was spent in wondering what it all meant. They filled me



RUFF AND REEVE.

(Photographed by E. L. Turner.)

with amazement. Why do they behave in this ridiculous manner, and what is the meaning of their extraordinary behaviour? How did it originate, and what is the use of it? Viewed dispassionately, the entire get-up of a Ruff in nuptial plumage is absurd in the extreme. But you cannot view them dispassionately for long; they arrest attention and keep you on the *qui vive*; for it is impossible to tell what the next move will be. No photograph can begin to do justice to the variety and wealth of colouring of the plumage. Many of the tippets are very lovely. Rich chestnut and black,

black and white, soft buffs and browns, and occasionally pure white, with ear-tufts to match—these colours are harmonious and do not detract from the birds' dignity. But when you get a silver coloured tippet and white ears, then the effect is ludicrous.

I did not see Ruffs fighting at the beginning of the breeding-season, but certainly throughout the time I watched them their whole attitude struck me as a pose. I never saw anything approaching the passionate display and fierce fighting



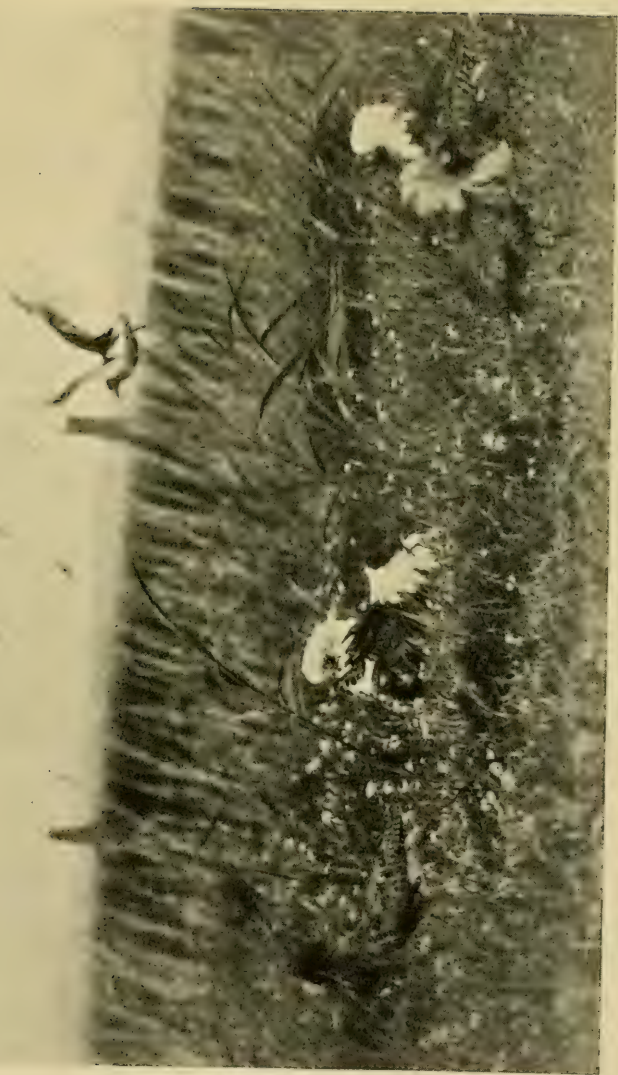
RUFFS.

A general *mêlée*.

(Photographed by E. L. Turner.)

that characterizes the Moorhen (*Gallinula ch. chloropus*). On no occasion did I see even a feather fly; and though they definitely made lunges at the warts on each others' faces, I did not see blood drawn. I have never heard the Ruff utter any sound. The noiselessness of the display is one of the reasons why it seems so unreal; you feel as if you were watching a dumb show. I have been very familiar with the spring and autumn migrations of the Ruff, but I have never, even then, heard them call.

The Ruff in the foreground of the photograph on p. 149 was



RUFFS: An intruder is driven away.
(Photographed by E. L. Turner.)

only four feet from my tent. He invariably returned first, and seemed to be "cock of the walk." He seldom moved from his own hill. Twice a day, during about three days, at 11 a.m. and 2 p.m. (solar time) a Reeve alighted close to him. All the Ruffs on this hill saw her coming, and bowed themselves to the ground as she approached, and remained in this devotional attitude for some seconds after she left. This Reeve is visible on the plate; she is standing by the Ruff on the right-hand side, with her back to the observer.



RUFFS.

An affair of honour.

(Photographed by E. L. Turner.)

She is preening her breast, and the wings are parted, showing the white rump. Each day she took her stand by this Ruff; she did not approach the others. After her departure, the six or seven other Ruffs would suddenly straighten themselves, and either begin to dance or else two would fight. Sometimes all fought, and there ensued a characteristic whirl of wings; if two only engaged, the rest looked on at the duel. But as far as my limited observations went, the fights were sham fights, and mere exercises in the art of fencing. The arrival of an extra bird on the scene generally meant a display of

energy on the part of all the Ruffs, which had taken up their positions. They either rushed at him, or else gyrated on their own little hills. If all the hills were occupied the intruder flew away.

I saw a number of nests, they were generally placed alongside the dykes, where the ground is slightly raised. The Reeves were very tame; it is difficult to keep them off the nest while you are erecting your tent, and they slip back and snuggle down in their rather deep nests long before you are ready for them. The Reeve's life is a busy one, and there seems no room in it for fear. The beautifully pencilled plumage harmonizes well with the lush green grass and rushes. These so-called meadows where the Reeve and many other of the Texel birds nest are charming in May and June. They are gay with pink thrift and sea-aster, for the flora is largely of a maritime character. I was reproved for calling these fields "marshes." They would be marshes at home, but in Holland they are reclaimed lands. The Reeve allows herself very little leisure, when on the feed she feverishly pecks insects from the grass and never wanders far from her nest.

Both Ruffs and Reeves are numerous everywhere in Holland where there is suitable breeding-ground. They are looked upon as game, which seems a pity. However, the Dutch have learnt wisdom from our mistakes. Their wealth of bird-life must inevitably decrease before the advance of science, and, so, large reserves have been purchased within recent years. Here the birds may breed in peace. I owe a large debt of gratitude to the controllers of these sanctuaries for letting me wander at large, for alas, the Englishman is regarded with considerable suspicion! As one eminent Dutch ornithologist remarked to me: "We preserve our birds for the English to steal their eggs."

NOTES ON THE NESTLING-DOWNS OF THE BRITISH HAWKS.

BY

H. F. WITHERBY.

IN a very interesting paper entitled "A Contribution to the Study of Nestling Birds" in the October number of the *Ibis*, Mr. Collingwood Ingram states (p. 872) that "in the young of raptorial birds the nestlings are hatched more or less evenly covered with down, composed apparently of both pre-pennæ and pre-plumulæ," and that subsequently there is a new growth of down, which Mr. Ingram evidently considers to be plumulæ. Plumules form the under-down of the adult bird.

I have recently been working out for the *Practical Handbook* the plumages of the British Accipitres, and while I can confirm Mr. Ingram's statement that the nestling has three different downs, I cannot agree that the last one grown consists of "plumulæ," *i.e.*, the under-down of the feathered stage. This third down, which I have labelled (c) in the sequence set forth below, is peculiar to the nestling stage just as are the other two. It is often of a different colour from the under-down afterwards grown in the feathered bird and always of a much coarser and less silky structure, and usually much more plentiful. In no case have I found that it is succeeded by the under-down in feathered birds. It is shed when the feathers of the juvenile (still in the nest or just out of the nest) are nearly full grown. The under-down of the feathered juvenile grows at about the same time as this down is shed, but so far as I have been able to discover it is quite independent.

The nestling-downs of the British Accipitres, so far as the material which has been available for examination goes, may be thus described :—

Down (A).—When first hatched the nestling is covered with a fairly short down (in some such as Kites, long and hair-like on the crown). This down is not very thick, and the skin is usually rather bare on the sides of the neck and sides of the belly. It is usually white or creamy, and is composed of pre-pennæ, that is to say, it is immediately succeeded by the first true feathers (of the juvenile) which push it out and to the tips of which it clings.

Down (B).—This is composed of very short tufts usually

white and growing very sparsely here and there amongst the pre-pennæ or *down* (A).

Down (c).—When the nestling is about ten days old it begins to be covered very thickly with a long and coarse (woolly in some species) down, which is usually of a grey or brownish-grey colour. When fully grown it almost entirely conceals the *down* (A) and it replaces the short tufts of *down* (B) which can be seen clinging to its tips here and there, but it also grows in many parts where there is no previous down. This down is shed when the first true feathers are nearly grown. The under-down ("plumulæ") of the feathered bird grows about the same time that *down* (c) is shed and is always of a different structure and often of a different colour.

I have found these three downs in nestlings of such different genera as *Falco*, *Aquila*, *Buteo*, *Circus*, *Accipiter*, *Milvus*, *Pandion*, but of the other genera I have not been able to examine nestlings in a stage to make certain that *down* (B) is present, although all seem to have (A) and (B).

AN EARLY RECORD OF THE GREAT BUSTARD IN KENT.

BY

N. F. TICEHURST, M.A., F.R.C.S.ENG.

THE following early record of the Great Bustard (*Otis tarda*) in Kent is particularly interesting, because I believe it to be actually the earliest mention of this bird in England. It occurs in the Account Book of the Chamberlains of the City of Canterbury for the year 1480-81, and is here taken from the extracts from these books printed in the ninth report of the Historical Manuscripts Commission. The items for this year are transcribed in full in this report as a typical example of a year's accounts, but the accounts themselves range back another ninety years, and as selected items only from these are printed, it is quite possible that a search of the originals might reveal a still earlier record. The next oldest would appear to be, as Mr. J. H. Gurney informs me, one, about forty years later, in the Le Strange Household Accounts (*cf.* Stevenson, *B. of Norfolk*, II., p. 2.) The present mention of the Bustard will be found in the record of expenses incurred over a complimentary banquet given by the Mayor and Corporation to one Master John Rotherham, in recognition of the many benefits conferred by him on the City. It is perhaps worth reproducing here in full :

"Solut. pro Jantaculo dato Magist. Johanni Rotherham pro multiplia sua benevolentia Civitati Cantuar. multis modis impensa, ad mandatum et preceptum Majoris, unacum assensu et consensu Aldermanorum, Camerariorum, et aliorum honestorum virorum ejusdem Civitatis, in domo Will. Hewet, *viz.*, in pane, cervisia et berisia ii.s. iiiii.d. Item in carnibus bovinis et le marybonys xiii. Item pro uno bustardo xvi. Item pro iibus caponibus iiiii.s. iiiii.d. Item pro uno agno xvi.d. Item pro iiiior perdicebus xvi.d. Item pro iibus porcellis xii.d. Item pro Tucets iiiii.d. Item pro costa carnis aprine viii.d. Item pro iibus fesanciis xvi.d. Item solut. pro vino rubeo, albo, et dulci v.s. iiiii.d. Item pro focalibus et carbonibus xiii.d. Item pro speciebus pro tucetis et le stued mets ii.s. ii.d. Item sol. Coco pro labore suo et pro famulo suo xii.d. . . . xxiii.s. vii.d."

It will be noticed that the value of a Bustard in these days was the same as that of four Partridges, two Pheasants, or a lamb, but only about two-thirds of that of a Capon, though it is worth mentioning in this connection that Kentish Capons were of high repute, even beyond the county's boundaries, and always fetched a high price.

It is perhaps hazardous to base any conclusion on a single

record such as this. We have no direct evidence of the former existence of a drove of Bustards on any part of the North Downs in Kent, though it is highly probable that such existed, just as they did on the South Downs in Sussex. The latter would have been the nearest locality from which a Bustard could have been obtained, if it were not indigenous. Taking into consideration the character of the intervening country and the total absence of roads in those days it is highly improbable that the bird should have been brought from so great a distance. Barham Downs, within a few miles of the city's gates, must have then provided miles of wild and barren upland which we know was open enough to have been the scene of more than one historic gathering, and was the frequent camping ground of considerable armed forces. What is more likely than that it was the home of an indigenous drove of Bustards, whose members furnished occasional items in the banquets of the City Fathers of Canterbury.

THE FOOD OF THE PEREGRINE FALCON.

BY

J. F. PETERS.

THE following notes on the food of the Peregrine Falcon (*Falco p. peregrinus*) have all been made by me in the Lake District, either actually in the eyrie or on the feeding place.

The records from each eyrie are separately recorded, together with the date on which the observation was made.

Eyrie No. 1.—April 7th, 1912, 3 Pigeons; Sept. 5th, 1915, 1 Red Grouse, 1 Pigeon; Oct. 13th, 1915, 1 Buzzard, 1 Red Grouse, 3 Curlew, 1 Wood-Pigeon, 1 Stock-Dove, 1 Snipe, 1 Pigeon, 1 Mistle-Thrush, 1 Lapwing, and 1 Redwing; April 18th, 1920, 1 Pigeon.

No. 2.—April 19th, 1912, 1 Red Grouse, also remains of Pigeons; April 18th, 1914, The eggs of this pair had been taken, but the Falcon was still about the place. On the feeding place were the partly eaten remains of the Tiercel Peregrine; also 1 Pigeon, 1 Grey Wagtail, 1 Mistle-Thrush, 1 Starling, 1 Lapwing and some Meadow-Pipits. March 21st, 1915, 1 Lapwing, 1 Mistle-Thrush; April 5th, 1915, 1 Grouse, 1 Pigeon, 1 Mistle-Thrush, 2 Starlings, 2 Pied Wagtails, 1 Chaffinch, and Meadow-Pipits.

No. 3.—April 20th, 1912, 1 Lapwing, 1 Meadow-Pipit, Pigeons; April 19th, 1914, 1 Lapwing; April 24th, 1914, 2 Pigeons; April 4th, 1915, 2 Lapwings.

No. 4.—Aug. 17th, 1913, Pigeons.

No. 5.—April 2nd, 1915, 1 Pigeon.

No. 6.—May 5th, 1915, 1 Pheasant, 1 Pigeon.

No. 7.—1912, 1 Great Spotted Woodpecker; April 18th, 1915, 1 Sparrow-Hawk, 1 Lapwing; April 29th, 1915, 1 Mallard, 2 Pigeons, 1 Starling.

I have also on one occasion seen a Carrion-Crow taken, and have a large number of Pigeon rings collected from various eyries in the district. A remarkable feature of the above records is the presence of three species of Raptorial birds—Peregrine, Buzzard and Sparrow-Hawk—which do not seem to have been previously recorded, though Mr. S. P. Gordon once met with remains of a Kestrel.

In the Isle of Man I have seen Choughs on a feeding place, and for several years I had the Pigeon rings collected for me at one breeding place in Scotland and got as many as I could hold in both hands.

NOTES

BROODING PRIOR TO LAYING.

As is well known, birds are generally to be found on the nest for a short time previous to laying, but in some cases the period seems to be much prolonged. The habit of brooding is, I think, fairly common in the Kestrel (*Falco t. tinnunculus*), as I have often observed it ; it is also occasional, at any rate, in the Peregrine (*F. p. peregrinus*). I can only recall one case of a Sparrow-Hawk (*Accipiter n. nisus*), and although she was constantly on the nest, she may have been adding small material or shaping the nest during this period, and not merely brooding.

I have also known instances of Rooks and Crows (*Corvus frugilegus* and *C. corone*) brooding for quite a considerable time before laying. One Rook seemed to be always on the nest for about a fortnight, but day after day we put her off and climbed up, only to find the nest still empty, till at last she deserted.

An empty nest of Hedge-Sparrow (*Prunella m. occidentalis*), with the bird on first found on June 13th, 1920, was still empty on June 20th, although the bird was again on. Two days later a boy whom I sent reported that she was again sitting, but had not laid. I revisited the nest on June 27th and found the bird still brooding on the empty nest. This was also the case when the nest was visited on June 29th, but four days later we found the nest deserted. During the whole of this period there was no sign of any addition to the nest material.

This habit is of course quite distinct from incubation on an empty nest after the eggs have been laid and taken, as is often noted in the case of domestic fowls. J. H. OWEN.

NOTE ON BREEDING-HABITS OF LESSER REDPOLL IN S. GLAMORGANSHIRE.

THE occurrence of the Lesser Redpoll (*Carduelis linaria cabaret*) in this district during the summer is sufficiently rare to warrant a record being made of a rather interesting incident which came under our notice this season.

On May 14th, 1920, a female Lesser Redpoll was seen. A second bird was with her. They moved to an alder tree, about three yards away. Here one of them disappeared, but a careful search with glasses revealed it moving about

inside a partially constructed nest, built on a horizontal branch some twelve to fifteen feet from the ground. These two birds were watched back to the tree several times, one going to the nest, and the other remaining in the tree near it, where it occupied itself by preening.

At this stage a third bird was noticed, a male, very conspicuous in comparison with the other two, both of which were certainly females. The three birds now indulged in a lot of chasing, twisting about among the tree tops in a compact little bunch, going at times some distance away, at others, dodging among the branches of the alder, near the nest.

Only the females actually visited the nest, and then only one at a time. It was impossible to ascertain if both, or one only, was engaged in the building operations, as they were indistinguishable from each other. Both would depart to hunt for nesting material, but on their return, one would go to the nest, and the other would sit and preen in the tree, occasionally seemingly trying to drive the male off. At such times the latter would assume all kinds of strange and awkward postures. While the females were away, he would remain in the tree near the nest, crouched down with tail outspread. On one occasion he displayed to the female which was sitting in the tree preening, while the other was at the nest. Raising his wings high above his back, he slowly hopped from one branch to another, and then back again, spreading his tail wide, and uttering a low hissing note. The wings were kept raised all the while, and sometimes slowly fluttered.

On the 19th the nest was found to contain three eggs. Our next visit was on the 21st, when we found that the nest had been robbed. Although a careful watch was kept, and many visits paid to the place, the birds were not seen again, and apparently no further attempt at breeding was made in that locality.

It is interesting to note that this site was within fifty yards of the one used in 1910 (Vol. XIII., p. 136).

GEOFFREY C. S. INGRAM.
H. MORREY SALMON.

LATE NESTING OF BULLFINCH.

On September 3rd, 1920, at Burnham Beeches, Bucks, I found three nests of Bullfinches (*Pyrrhula p. pileata*). The first contained three half-fledged young and one addled egg; the second, four eggs on which the hen was sitting; and the third, five strong young.

The young of the first nest flew on September 12th; the second nest was harried by a pair of Jays; and the young of the third nest flew on September 6th or 7th. All three nests were built in thick clumps of sloe bushes, and were all within a radius of three hundred yards. It is impossible to say whether these nests contained second or third broods; but the date seems unusually late.

A. MAYALL.

CIRL BUNTING BREEDING IN NORTH-EAST BUCKS.

ALTHOUGH the Cirle Bunting (*Emberiza cirrus*) is known to breed in the Chiltern Hills district, as stated in Hartert and Jourdain's *Birds of Buckinghamshire and the Tring Reservoirs*, p. 181, there seem to be no nesting records from the north-east of the county. In 1920 a few pairs were met with between Fenny Stratford and Newport Pagnell, and two nests with four and three eggs respectively were found on May 21st and June 17th: the former in furze, three feet from the ground, and the latter in a thick bramble-bush at the foot of a large elm.

H. L. COCHRANE.

NESTING-SITES OF THE HOBBY.

IN a recent number of the *Field*, Mr. Norman Gilroy records the fact that on July 3rd, 1920, he found the Hobby (*Falco s. subbuteo*) breeding in the nest of a Rook (*Corvus f. frugilegus*) in a rookery still occupied by the Rooks. He states that he believes this to be the first recorded instance of a Hobby nesting in such a place and under such conditions. On June 30th, 1911, I found the Hobby breeding under similar conditions, but I did not publish the fact. The nest contained three eggs which were chipped and ready to hatch.

As a rule I have found that nests of Carrion-Crows (*Corvus c. corone*) are used, and once I have seen the eggs in the nest of a Heron (*Ardea cinerea*), but in this case the Herons had hatched and flown and left the Heronry for the season, and once in a nest that might have been the deserted nest of a Sparrow-Hawk. Mr. J. Walpole-Bond adds to this list the deserted nests of Magpies, Ring-Doves and sometimes on the "drey" of a squirrel in his *Field Studies of Some Rarer British Birds*, in which work will be found the most accurate description that I know of the habits of this and seventeen other rare birds.

JAMES R. HALE.

HEN-HARRIER IN SHROPSHIRE.

I HAVE recently examined at the local taxidermist's a female Hen-Harrier (*Circus cyaneus*) shot about October 30th, 1920,

at Cruckton, near Shrewsbury. On May 9th, 1919, a grey Harrier was seen by several people to pounce at chickens in a poultry-yard in the suburbs of Shrewsbury. It was evidently an adult male, but whether of the Hen- or Montagu's Harrier it is impossible to determine.

H. E. FORREST.

HONEY-BUZZARD IN CO. ANTRIM.

ON June 28th, 1920, Messrs. Sheals, the well-known Belfast taxidermists, received for preservation a Honey-Buzzard (*Pernis apivorus*) which had been shot at Suffolk, Dunmurry, a well-wooded district near Belfast. On dissection it proved to be a male, and its crop contained a large quantity of ants' "eggs."

It is interesting to note that the bird had every appearance of having been nesting, its breast being bare, and the boy who obtained it informed Messrs. Sheals that he had seen it about for some time previously.

HERBERT T. MALCOMSON.

OSPREY ON THE CHESHIRE BORDER.

AN Osprey (*Pandion h. haliaëtus*) frequented Combermere (on the borders of Shropshire and Cheshire, though actually in the latter county) during the first half of September. It left about the 17th. It was several times seen to catch fish by Sir Kenelm Crossley. The last previous record in the district was in 1909, when an Osprey frequented the meres at Ellesmere from mid-May till 10th June. H. E. FORREST.

GLOSSY IBISES IN NORFOLK.

I AM sorry to say that two Glossy Ibises were killed in Norfolk, one on September 18th 1920, and the other about the same time, I believe, but the exact date is not forthcoming.

J. H. GURNEY.

[Mr. H. J. Welch records two Glossy Ibises seen near Land's End (Cornwall) on Sept. 30th (*Field*, October 23rd, 1920, p. 608) and Mr. W. H. Erskine records two in Islay (Argyllshire) on September 6th (*t.c.*, September 25th, 1920, p. 459).—Eds.]

RED-CRESTED POCHARD AND GADWALL IN DEVON.

IN a small collection of birds shot on the Exe estuary by T. S. McClaughlin, a fisherman living at Powderham, I came across a male Red-crested Pochard (*Netta rufina*) and a Gadwall (*Anas strepera*). The former was shot on November 2nd

about 1910, and is now on loan to the Royal Albert Memorial Museum, Exeter. It is apparently only the second record for Devon. The Gadwall is a casual winter visitor, of rare occurrence, to the south coast of Devon and only one or two have occurred on the Exe estuary. No record was kept of the date on which it was shot, and the taxidermist who stuffed it unfortunately keeps no register.

T. P. BACKHOUSE.

MOVEMENTS OF DIVERS ON THE MERIONETH COAST.

THE following notes seem to suggest a regular migration of Divers (*Colymbi*) along the Merioneth coast in early autumn. Of course it is possible that some of the records may refer to the same birds.

1916. Sept. 28 Two Divers, swimming S. One an adult Black-throated (*C. arcticus*), the other young. Wind E.

Oct. 1 Two Divers, one of them an adult Red-throated (*C. stellatus*), swimming S.

1920. Sept. 21 Adult Red-throated Diver, swimming S. Wind E.

Sept. 23 Four Divers; two disappeared and the other two, which were Red-throated Divers and probably a pair, swam out to sea. Wind S.E.

Sept. 25 Two Divers, heading S. Wind W.

Sept. 28 One Diver, swimming S. Wind W, then E.

All the Divers were close in, though usually out of shot of the shore. The adult Red-throated seen on September 21st when swimming steadily down the coast kept 100-150 yards out, and proceeded as most of them did, entirely by swimming under water, remaining still while on the surface. It stayed under for twenty to thirty seconds at each dive, and rested for about half that time between dives. I walked abreast of it for three-quarters of a mile and found that its pace while swimming was about three and a half miles an hour.

MARJORY GARNETT.

LATE NESTING OF WOOD-PIGEON.

MR. R. J. N. NEVILLE informs me that he found a Wood-Pigeon (*C. p. palumbus*) sitting on two young as late as October 24th, 1920. The nest was in his garden near Barton in Norfolk.

CLIFFORD BORRER.

[There are several records of eggs or young of this species in October. The latest of which I have a note is that by

Mr. A. D. Lawrie (*Field*, November 3rd and 29th, 1900), who mentions young hatched on October 29th, and also during the last week of November, 1900.—F.C.R.J.]

LATE AUTUMN WADERS IN NORFOLK.

ON October 27th, 1920, I was out with Edward Ramm, the well-known gunner, near Blakeney in Norfolk. We identified the Little Stint (*E.m.minuta*), Curlew-Sandpiper (*E.ferruginea*), Dusky Redshank (*T.crythropus*), and Ruff (*Ph.pugnax*), all of which are unusual after the month of September. It is worth adding that the Dusky Redshank has been unusually plentiful this year in north Norfolk. Not only have one or two frequented the levels all through August, September and October, but small flocks were noticed in the early autumn. For instance, four were shot out of a flock of six near Blakeney in the first week of September; and a week or two later Ramm and I watched five feeding together for some time near the same place. The swift, hurried manner of feeding is very distinctive and noticeable, and so far as I know, unlike that of any other wading bird. Some of the birds I saw almost immersed themselves as they dashed here and there through the shallow water.

CLIFFORD BORRER.

BLACK-WINGED STILT IN WIGTOWNSHIRE.

ON October 17th, 1920, I observed a Black-winged Stilt (*H.himantopus*) on the upper shore of Loch Ryan, Wigtownshire. It was an adult bird with a pure white head and neck, and was not wild—it settled within sixty yards of the nearest gun—and I got my keeper's telescope on to it for some time. When disturbed by some cows coming along it flew off out to nearer low-water mark. Later on it rose again and went away at a fair height to the S.S.E. Its distinctive call first attracted attention. The last ones I saw and observed closely were on the Lake at Belah, not far from Gaza, Palestine.

M. PORTAL.

BLACK TERN IN LANCASHIRE.

WITH regard to Mr. R. A. H. Coombe's note of a Black Tern (*Hydrochelidon n. nigra*) in Lancashire on May 28th, 1920 (*antea*, p. 141), I might add that the species is now a regular spring migrant on the southern part of the Lancashire coast in small numbers.

H. W. ROBINSON.

BLACK-HEADED GULLS IN DELAMERE FOREST, CHESHIRE.

MR. F. A. BRUTON records (*antea*, p. 95) the return this year of the Black-headed Gulls (*Larus r. ridibundus*) to their old

nesting-site in Delamere Forest, which he had previously reported to be deserted in 1917; but I find from my notebook that on May 18th, 1918, I saw a fair number of birds and nests, at the old gully, as well as at the new one—the “submerged forest”—and again on May 18th, 1919, I saw a small number of birds at the old gully; whether or not these successfully brought up their young I cannot say.

The decrease at their original site is, however, partly explained by the formation of a third colony at the end of a mere, one and a half miles from the “submerged forest”; here I first noticed them on May 18th, 1919, and was told by the keeper that they had arrived two days before; probably they had been disturbed too much at their old site, but they soon settled down, and on June 2nd I calculated there were between fifty and one hundred pairs, many of which had eggs.

This year (1920) the third colony seems to be well established; on May 15th they were nesting and by July 3rd a number of the young were flying.

A. W. BOYD.

THE ALTITUDE OF MIGRATORY FLIGHT.—In an interesting paper in the *Ibis* (1920, pp. 920-936) Col. R. Meinertzhagen brings together all the evidence he has been able to find on this subject and shows that exact observations are few. Indeed the author's own observations made with theodolites and others recently made from aeroplanes are the most reliable. His conclusions are that birds need not and do not ascend much beyond 5,000 feet for the purposes of migration, and that those met with above that height are the exception rather than the rule, while the greater part of migration takes place below 3,000 feet; that nocturnal flight need not be and in fact is not, higher than diurnal; and that under normal conditions different species travel at different altitudes. The question of altitude is certainly a very important one, because it is one of the factors which should help in elucidating the mystery of how migrating birds find their way. Unfortunately there is very great difficulty in making exact observations at night, and those species which migrate at night do not as a rule also perform long journeys by day. We know that Carrier Pigeons are carefully trained to find their way by sight and that notwithstanding many lose their way, but they are descended from a species which is not a migratory one, and it is not therefore reasonable to argue that migratory birds find their way in the same manner. There is indeed a considerable amount of evidence, some of which is brought forward by Col. Meinertzhagen in his paper, to show that in

certain cases birds are not apparently guided by sighting distant shores, e.g., when flying close to the water and when crossing wide seas at night. Yet there is some evidence to show that birds lose their way in fog, and if this were proved to be the case in migrating birds would it not indicate that sight was not unconnected with direction?—H.F.W.

CARRION-CROW NESTING OFF CO. DUBLIN.—The Hon. Cecil Baring records (*Irish Nat.*, 1920, p. 69) that F. Mason, the gamekeeper on the Island of Lambay, off co. Dublin, states that *Corvus c. corone* bred there this year (1920). A pair nested at the same place in 1917 (cf. *Brit. Birds*, XI., p. 141).

NORTHERN BULLFINCH IN EAST LoTHIAN.—Mr. A. Cochrane states (*Scot. Nat.*, 1920, p. 89) that amongst some Bullfinches which he received on January 10th, 1920, was one with larger and coarser bill and longer wing, which appears to have been an example of *Pyrrhula p. pyrrhula*. The birds were caught on lime at East Linton, Haddingtonshire.

RING-OUZEL IN OUTER HEBRIDES.—Mr. F. S. Beveridge writes (*Scot. Nat.*, 1920, p. 93) that a female *Turdus t. torquatus* was killed at the Skillay Lighthouse, Monach, on April 14th, 1920, and sent to him. The lightkeeper stated that the next morning he saw two similar birds. The Ring-Ouzel is only a very rare visitor to the Outer Hebrides.

DIPPER IN LINCOLNSHIRE.—Mr. John Allison sends us a note to the effect that a Dipper (*C. cinclus*) was seen on Hackthorn Lake on many occasions during a period of three weeks from December 29th, 1919. On further inquiry we learn that it was seen by the Rev. B. J. Boodle and Mr. Cracroft, but unfortunately neither of these gentlemen is able to say to what race the bird belonged.

ROUGH-LEGGED BUZZARDS IN SUSSEX.—Mr. G. Edmund Arnold informs us that on November 8th, 1920, he saw a pair of *B. lagopus* between Little Common and Hooe.

SHOVELERS BREEDING IN THE LoTHIANS.—Mr. W. Evans states (*Scot. Nat.*, 1920, p. 84) that for a good many years past *Spatula clypeata* has bred at Threipmuir Reservoir in Midlothian. He first saw Shovelers there in December 1898, a pair in May 1904 were evidently nesting, and nests were found in 1910, 1917 and 1918. At Biel, East Lothian, Mr. Evans saw two drakes, a duck and a brood of ducklings

in June 1909. Mr. Evans states that the finding of the nest of the Shoveler in the Lothians has previously been recorded only prior to 1843 (Jardine's *Nat. Library*, XIV., p. 128).

YELLOWSHANK IN SCILLY ISLES.—At the October meeting of the British Ornithologists' Club Dr. H. Langton exhibited a female *Tringa flavipes* which had been shot by Major A. A. Dorrien-Smith on the Little Pool, Tresco, Scilly Isles, on September 2nd, 1920 (*Bull. B.O.C.*, XLI., p. 26). The bird had been observed about the pool for four days previously. This is the sixth example recorded for Great Britain.

BLACK TERNS NEAR GLASGOW.—Mr. D. Macdonald states (*Scot. Nat.*, 1920, p. 84) that he observed two *Hydrochelidon nigra* hawking over marshes adjoining the River Kelvin on May 4th and 6th, 1920.

LITTLE GULL OFF CO. GALWAY.—Prof. C. J. Patten records (*Irish Nat.*, 1920, p. 78) that a wing and foot of a *Larus minutus* were sent to him by the lightkeeper at Slyne Head in February 1919. Apparently the bird had fallen victim to a Peregrine Falcon, and its remains in a fresh condition were picked up early in October 1918. There are only about eleven previous occurrences recorded for Ireland.

LETTERS.

BREEDING OF THE WOOD-LARK IN SOMERSET.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. Stanley Lewis was, no doubt, right in showing little interest in the clutch of Wood-Lark's eggs taken in Somerset twenty years ago (*antea*, pp. 116 and 144) as I omitted to give full data. The eggs are in the collection lately presented to the Taunton Castle Museum by Mr. C. R. Gawen, who used to reside at Spring Grove, near Milverton, and the full data from that gentleman's manuscript catalogue of the collection are as follows: "Spring Grove, April 28th, 1900, four eggs; incubated, birds seen; hen watched from nest, which was on ground in small turf field close to covert." I may add that the nestlings described by myself (*antea*, p. 116) were found in Dorset, close to the Somerset boundary, on May 8th, 1920.

F. L. BLATHWAYT.

MELBURY OSMUND, DORCHESTER.

THE SPARROW-HAWK OF THE OLD WRITERS.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. J. E. Harting, whose acquaintance with the literature of falconry is much greater than mine, does not agree with the view expressed in a footnote to Dr. Ticehurst's paper (*antea*, p. 84), viz., that the Sparrow-Hawk of the old writers was often really a Goshawk (*A. gentilis*).

How far the two birds were mixed up together in the minds of the falconers of the sixteenth and seventeenth centuries is now very difficult to determine, but one would hardly think so much care would have been bestowed on the small Sparrow-Hawk, when a better bird was obtainable. It has also to be remembered that modern falconers have found the Sparrow-Hawk of very little use for Partridges—a female in condition could manage young ones in August or September, but hardly be capable of taking old Partridges, or of catching full-grown rabbits. That the Goshawk was the bird which was commonly used to fill the larder of large country houses like that of Le Strange, at Hunstanton, in Norfolk, in the sixteenth century, before guns had come in, is pretty clear.

J. H. GURNEY:

KESWICK HALL, NORFOLK.

REY'S WORK ON THE CUCKOO.

To the Editors of BRITISH BIRDS.

SIRS,—In working up my observations on the Cuckoo, of which you have already published a preliminary note (*antea*, p. 71), I have been studying what has been previously published concerning the breeding-habits of the bird.

It will be agreed, I think, that Dr. Eugene Rey's book *Old and New Information Concerning the Domestic Economy of the Cuckoo*, is incomparably the most thorough work on the subject; but the book is in German, and so far as I know no English translation has been published. Several friends having expressed a wish to possess a translation, it has occurred to me that probably many other English ornithologists would also like one. I have therefore arranged to have the work (which consists of over 100 printed pages and charts) translated and a number of copies multigraphed from typewritten copy on foolscap paper. The translation will be certified as being accurate. The price of a single copy of the translation has been fixed at £2, but each subscriber may exercise the right to purchase an additional copy at £1.

I need hardly say that I intend to make no profit out of the work; but as there will be comparatively few copies available, may I ask those of your readers who desire copies to write to me at once, stating whether one or two copies are required and enclosing a cheque, so that correspondence may be minimized. The work will then be posted immediately it is completed, which should be before the end of the year.

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NOTES ON THE BREEDING OF THE LESSER KESTREL.

BY

F. N. CHASEN.

Two species of Kestrels are found commonly in Macedonia. *Falco tinnunculus* is resident, but in most districts it would appear to be numerically inferior to the smaller *F. naumanni* (Lesser Kestrel), which is a so-called "summer" migrant to the country, but which, in truth, spends the greater part of the year in Macedonia, arriving from its winter quarters early and departing thence late.

The valley of the river Struma, or Struma plain, is particularly favoured by *F. naumanni*, and there the home life of this bird can be studied with advantage—if not under the most favourable circumstances. The salient features of the breeding-habits of such a well-known species have, naturally enough, been worked out, but the Lesser Kestrel appears to be more adaptable and less conservative in its habits than most Accipitres, and the conditions under which it was met with by the present writer certainly differ in some interesting points from those given in the accounts of quite a number of its historians.

In the spring of 1917 I happened to be living at Ormanli, which is a small village lying between the river Struma and the Rupel Pass, and a certain corner of this village must have offered some special attraction to the Lesser Kestrels. This selected locality consisted of the dilapidated mosque and neighbouring priest's house (unoccupied), with numerous dwellings of the ordinary native type in close proximity.

As early as March 8th a pair of Kestrels were paying marked attention to the mosque, but they had domestic troubles from the beginning. A large number of Jackdaws had taken up their abode in the courtyard and were always disputing over every available nesting site in the neighbourhood. A pair of Little Owls spent days in moping in a spare corner of the mosque, apparently resigned to their fate and contented to have anywhere that the rowdy Jackdaws chanced to leave them. In addition to these birds, dozens of Sparrows and Starlings were quarrelling over the smaller nooks and holes in every corner. A huge tree growing by the door of the priest's house had already been appropriated by a pair of Doves. When the Lesser Kestrels arrived, the complications of this motley crowd were far too intricate for a

man to understand; but anyhow, the hawks showed more spirit in contesting the claims of the Jackdaws than any of the other birds had seemed to do, and in two days after their arrival they had established a firm claim to a suitable hole under the low roof of a long mud-built hut which was being used by troops as a stable for mules.

The entrance to this nesting place was about six feet from the ground, and very conspicuous by reason of the white splashes of excrement that marked it. Every time the birds entered the hole they had to swoop within a few inches of the mules' tails. Transport drivers were constantly at work within a few feet of this nesting site, grooming mules and saddle cleaning, and usually singing and shouting about their work. Mules, too, are not quiet creatures to live with or near. The Kestrels, however, soon became very confiding, and would sit about the low fig-trees growing near their home and allow a very close approach. It was then that one could see the pink flushed breast of the male, which is so very much more evident in a live bird than in the newest of skins.

Shortly after this pair of birds had settled down to a more or less peaceful existence, another pair of Kestrels arrived in the district and duly contested their right to live with the quarrelsome Jackdaws. This pair were not quite so successful in their campaign, and eventually had to settle down under the low roof of another native hovel about sixty yards from the mosque. The two pairs of hawks agreed remarkably well and frequently combined forces to repel the Jackdaws. Several other pairs soon appeared in the village and its environs, and by March 24th I was aware of six intending nests within a short radius of the mosque. All of these were under the tiled roofs of native houses and entered by a hole in the eaves. In most cases the nest was well under the roof and beyond reach from the outside, but once I found eggs almost on top of the wall, *i.e.*, just under the eaves, and later heard of other similar cases.

One pair of birds were unfortunate in their choice of a site. They chose a space between the low roof of a room—being used as a bedroom—and the tiles. Prodigious scratching and scrambling noises through the night proved too much for the nerves of the occupant of the room, and thinking that the season was not sufficiently advanced to prevent the birds from choosing another home, under some other person's roof for preference, he blocked up the entrance hole of the nest with a large clod of earth. As he had surmised, the Kestrels soon established themselves in a neighbouring

cottage. In the course of a few days the man who had turned them out unblocked the hole for the purpose of seeing how far the Kestrels had progressed with their domestic arrangements, but he quite forgot to replace the clod of earth when he had finished. Within a very few hours the Kestrels had returned to their original home, in which they subsequently reared a brood.

The behaviour of this species before the more strenuous duties of incubation began is worthy of note. The birds in Ormanli spent many hours circling and swooping about in the air, above or near their nests, uttering incessantly a harsh "Kee-chee-chee." Most of the sunnier hours of the day would be spent in this manner, and at dusk all the birds in the neighbourhood would form into one large band and repeat the performance. Each pair of birds also had their own favourite perch—usually a particular twig on the tree nearest to their nest. Here they would huddle most affectionately together.

The females sat very close, and, scrambling up the mud walls to look at eggs, I was twice flicked in the face by the wing of a parent bird which had remained on its eggs till the last moment. Sometimes, if the eggs were not very far back, I would come face to face with the sitting bird. It was simple to catch the old birds by putting a piece of net over the entrance hole and I saw one man catch a female by grabbing her as she darted off the eggs. On one occasion a male flew into a room in pursuit of a large grasshopper and was captured.

Copulation was first noticed at the beginning of April, and was very frequent about the 19th of the month. It usually took place on the topmost slender twig of a tree and in such a precarious position that both sexes had to extend their wings and strive hard to maintain their balance. A low chattering, which is a peculiarly penetrating noise, was made the whole time. For a long time I believed that this noise was only made during the process of mating, but on a later occasion a pair were heard chattering gently to each other as they sat at rest on the bough of a pomegranate bush.

A nest in Ormanli contained two eggs on April 22nd. On June 8th a nest of young at Elisan were at least a week old.

Lizards undoubtedly form a large part of the food of this species. It was a common sight to see a bird flying about with a lizard grasped in its feet, the reptile's long tail dangling down conspicuously. The reason for carrying food about in the air for some time is a little obscure. It may be that the bird is looking for a suitable place to eat its prey, or

perhaps the little hawk is prompted by the same reason that causes the sportsman to sling his ducks over the barrel of his gun, when returning home, although there may be ample room in his game bag!

Sometimes a hen bird could be seen sitting complacently on a twig while the male was foraging for food. This obtained, the male would feed its mate with great solicitude, she greeting him on each arrival with a prolonged call. In the case of a lizard being brought—always in the feet—the male would transfer it to its beak just before alighting beside the female. The female would take a good bite or, rather, pull. The male would then transfer the remaining portion of the reptile to its feet again and take wing. It would then fly round the trees several times, indulge in a few aerial evolutions, and then deliver the remaining piece of lizard to the female. The fact of the hen bird being fed by the male when not actually on the nest seems particularly interesting.

This hawk has a partiality for short nocturnal flights. In the middle of the night a single bird would swoop from under a roof and gambol about for some time round the trees—making use of the usual call-note meanwhile—and then return to the nest; a sitting bird just stretching its wings for a short time.

Sometimes at noon, when it was very hot and sultry, there would be myriads of midges and other pests humming about in the air. Then perhaps sixty or more Kestrels would flock together and hunt the insects with many downward swoops and pursuing flutters. The normal behaviour of the Lesser Kestrel in the air, *i.e.*, when not indulging in the Swallow-like lapses just described, is very like that of the larger Kestrel. Maybe the smaller species does not hover so often or so long, but it certainly does hover and in true Kestrel style. With quivering wings and tail bent down to its fullest extent, feet drawn up, and head and neck inclined downwards, eagerly scanning the earth, the Lesser Kestrel will remain poised practically stationary. Very often when a bird was hovering at a convenient height, and against a good background, I would gaze fixedly at it for some time to try and determine how much a Kestrel does deviate from its course when hovering. It was easy to get the tip of the tail to coincide with a dark speck in the clouds, or perhaps the head with a narrow rift in the blue sky, and unless the bird changed position, obviously with intent, it would not shift a degree from its position. After a spell of hovering there may be a short sail, a make-belief swoop, a few flaps of the wings,

perhaps a change of direction, and then another hover. In fact, the behaviour is very similar to that of the Common Kestrel.

Small grass fires are extremely common in the summer in Macedonia, and columns of smoke can often be seen curling upwards from many parts of the country at once. As soon as the tiniest wisp of smoke wreathes up from the hillside the Kestrels begin to arrive, and the aggregate of the small flocks that unite on these occasions often totals more than a hundred birds. The birds show great activity in pouncing on the scattering grasshoppers and other victims of the fire. In the autumn flocks composed of young birds of the year are common.

A number of nestlings examined in June were very uniform in their appearance. The beak and fleshy angle of the gape were flesh coloured. All the bare skin on the head—and there was a good deal of it—was of the palest green, the legs, toes and claws were yellow and quite as bright as in the adult.

A friend of mine took a pair of nestlings from the nest and reared them. These youngsters spent most of their time asleep, keeping one eye open and the other shut. Their clamouring for food was incessant, but they were always satisfied by pushing pieces of army "bully-beef" down their throats. These two birds became very attached to the man who fed them, and even when they were fully fledged and capable of fending for themselves, they could always be found—when hungry—sitting on the top of their owner's bivouac. They were allowed complete liberty, and would make long flights over the surrounding hills, being absent for several hours. On their return they would not infrequently settle on the head or shoulders of their owner, who could also induce them to do this by means of low whistles. One day they made a long flight only returning to our camp in the evening to roost. The next day they flew off and never returned.

A female accidentally captured when it had eggs was one of the most untractable and ferocious birds I have ever handled, but a pair of adult birds taken earlier in the spring lived quite contentedly in captivity with a Little Owl.

FURTHER NOTES ON THE NESTING OF THE STORM-PETREL.*

BY

AUDREY GORDON.

OWING to the exceptionally stormy summer of 1920 there was little opportunity of visiting the almost inaccessible Hebridean Islands which are the haunt of the Storm-Petrel (*Hydrobates pelagicus*). But on August 18th one nest was found with the egg within a few days of hatching. The island on which this nest was situated was again visited on October 13th, exactly eight weeks later, and the nest was found to contain an almost fully fledged young Petrel. The nestling was fully feathered on the upper parts, but tufts of down still adhered here and there. The under parts were thickly covered with long down, about an inch in length. Under this, however, the feathers were partly grown. The bird's beak had a good deal of down sticking to it, as though it had been engaged in freeing itself of down. In all probability it would be ready to leave the nest in a week's time, say about October 20th. This seems to show that the young of the Storm-Petrel remain in the nest between eight and nine weeks. The hatching of the egg has been proved to take at least five weeks, so the whole period of nidification occupies thirteen or fourteen weeks.

Three other young Petrels were found the same day. Two were approximately the same age as the last mentioned, but the other was not more than three weeks old, the wing-feathers just beginning to appear. This means it would not be ready to fly till the last week in November. As there is practically no nest, and the young bird not far enough below the surface of the ground to be sheltered from the wind, it is difficult to believe how they can live so late in the year, especially as the parent birds apparently never brood them either by night or day after they are a week old. Yet one never finds remains of dead young birds in the nesting crevices.

The plumage of the three oldest Petrels exactly resembled that of the adults, and lacked the white markings on the wing and tail-coverts described in bird books.

Besides these four young ones seen, several empty "nests" were noticed, showing that a few young birds had already flown, but, as in the Hebridean Islands, no eggs seem to be laid before the beginning of July, probably none leave the nest till about the first week in October.

* For previous notes see *British Birds*, XIII., pp. 232-4.

A CONTRIBUTION TO SWAN HISTORY.

BY

N. F. TICEHURST, M.A., F.R.C.S. ENG.

IN the course of various researches into the past history of the Kentish avifauna, the subject of Swan-rights has naturally presented itself for examination. During the years spent in collecting material for a history of the birds of that county search was made in vain in all the likely places with which I was then acquainted for any trace of their former existence ; and though one felt sure that this was merely due to want of effort directed in the proper channels, the subject was necessarily passed over in silence in that volume. Recent inquiry has, however, resulted in the accumulation of a certain amount of material, but at present this is so incomplete as to be hardly worth putting together in permanent form.

In the present paper I will, therefore, content myself with bringing forward one or two points that are of more than local interest. in that they throw a little light on the history of Swan-keeping at a very early date, including a Swan-mark, the record of which is, almost certainly I believe, the oldest of its kind that has yet been brought to light.

Our knowledge of English Swan-law, with its customs, regulations and marks is usually reckoned to date back to the statute of 22 Edward IV., c. 6 (1483). It is quite clear, however, from the preamble of this Act that the keeping and marking of Swans was a practice of far greater antiquity. Whether originally regulated by statute (since lost) or merely by custom, it is evident that it had become so universal, and poaching by unprincipled owners so rife, that this statute was really passed for the suppression of such irregularities and to restrict the ownership of Swans. Its provisions have been frequently quoted (*vide* Yarrell, *British Birds*, IV., p. 330, etc., etc.), but the preamble which is certainly just as enlightening from an historical point of view seems never to have been quoted and is referred to, so far as I can ascertain, in the *Birds of Norfolk* only. It may be of interest, therefore, to reproduce its text here (translated) :—

“ Item, Where as well our said Sovereign Lord the King, as other Lords, Knights, Esquires and other Noble Men of this noble Realm of England, have been heretofore greatly stored of Marks and Games of Swans in divers parts of this Realm of England, until of late that divers keepers of Swans have bought and made to them Marks and Games in the Fens and Marshes, and other places and

under colour of the same and of Surveying and Search for Swans and Cygnets for their Lords and Masters, have stolen Cygnets and put upon them their own Mark, by which unlawful means the substance of Swans be in the hands and possession of Yeomen and Husbandmen, and other persons of little Reputation; (2) Wherefore it is ordained," etc. etc.

Most Swan-marks hitherto published appear to have been taken from Swan-rolls and other records belonging to the sixteenth century or later, which is to be expected, since it was not till after the Act of 1483 came into force that it became necessary for permanent records to be compiled and kept. I can only find two references to the subject of an earlier date than this. One is a quotation in the *Birds of Norfolk* (III., p. 102) which describes just such a poaching event, as the statute was designed to prevent, that occurred in 1451; the other is the mention of the King's Swanherd in the Parliamentary Rolls of 1393 ("Swan Law," by Sergeant Manning, *Penny Cyclopædia*, XXIII., p. 372). The practice of keeping Swans by "persons of little reputation" is, however, well illustrated by certain entries in the Chamberlains Accounts of Lydd and New Romney. In the first half of the fifteenth century, and in the case of New Romney in the latter part of the fourteenth also (as far back as the records in either case extend), it was customary for both these corporations to make presents to people in high office, such as the Lord Warden of the Cinque Ports, his Lieutenant, the Archbishop of Canterbury, etc., whom it was to their interest to placate. Very frequently these gifts took the form of one or more Swans or Cygnets. These were invariably purchased, as the records state, from different people, inhabitants of the marsh or commoners of the town, who pretty certainly could not have been lawful keepers of Swans as afterwards defined by the Act.

From a perusal of some of the Corporation records of the Port of Sandwich, then one of the chief channels of communication with the Continent, it is clear that prior to 1483 measures were already being taken to restrict the ownership of Swans. The Customal of this town was transcribed at the beginning of Edward the Fourth's reign, probably between 1461 and 1465, by John Serles, then town clerk, from a more ancient manuscript (now lost) written by Adam Champneys in 1301. The transcriber, however, embodied with the older work many observations and customs of his own time, and others have been added since, so that we cannot certainly assign anything contained in it to an earlier date than 1461-5. In the paragraph dealing with the appointment and duties of the King's

Bailiff there occurs a long schedule of 152 articles of merchandise and live stock, upon which it was this functionary's duty to collect the king's dues. These were payable by all traders, other than freemen of Sandwich, bringing any of these goods into the town, apparently either by land or from overseas.

By this list the customs duty on a Swan was the relatively enormous sum of 6s. 8d., twice its value at that time as an article of food and double the duty on the next highest taxed article. Only four other things paid a higher duty than 4d. It is evident therefore that no one, barring freemen, who were exempt from these dues by their Charter, could afford to deal in Swans or import them from abroad unless he were a person of considerable wealth. I am assured by Mr. J. A. Jacobs, the curator of the Sandwich Records, that this entry regarding the Swan is in the handwriting of the original transcriber, so that this duty was imposed not later than 1465.

The Swan-mark that I now have to draw attention to dates from some time prior to the first year of Richard II. (1377) and possibly much earlier, as indeed others may be, though they have only come down to us in records bearing much later dates. It was inscribed in the earliest volume now remaining of the Corporation Registers of New Romney, between that date and 1352. The history of it is here compiled from information derived from the fourth, fifth and sixth reports of the Historical Manuscripts Commission, but the mark itself is reproduced (less the conventional outline of the Swan's bill) from a tracing, kindly taken for me by the Rev. C. E. Raven, from the book itself, which is now preserved in the library of St. Catherine's College, Cambridge. As given in the fourth report above-mentioned, it is so inaccurate as to be barely recognizable.



THE SWAN-MARK OF SIR RICHARD DE TOTESHAM *circa* 1370.

The earlier half of the Register is occupied with Corporation accounts and other matters concerning the government of the town, running in consecutive order from 1352 to 1381 in the handwriting of those who held the office of Common Clerk. From internal evidence it appears that the occupant of this post from the commencement up to some time in the

first year of Richard II. (when the handwriting changes) was one Daniel Rough or Row, who seems to have combined an occupation requiring considerable education and learning with that of a dealer in fish in a large way of business, holding office in later years as a Jurat, but never again as Common Clerk, and dying about 1385. The record of the death of Edward III. and the coronation of his grandson Richard II. is almost the last entry in his handwriting. The latter half of the book was evidently used by him during his term of office as a "Common-place" Book for the entry of miscellaneous matters, including the recording of conveyances and other deeds, not directly concerned with the government of the town. Amongst these latter on folios 84*a* to 86*a* are a number of leases and conveyances concerning tenements and land in the neighbourhood of New Romney and made between Sir Richard de Totesham or Dotisham of West Farleigh and Adam Adam of Bromhill in Romney Marsh. At the foot of folio 84*b* is a note in Latin, of which a translation reads :

"Mark on the beak of the Swans belonging to Sir Richard de Tot'[esham], knight, in the marsh of Romeney, as set forth"
[here follows the mark].

None of these conveyances, as was often the case, bear any date, but an entry two pages back is dated November 1366.

The Totesham family lived at Totesham Hall in West Farleigh, near Maidstone, so far back at any rate as the reign of King John and down to about the end of that of Henry VIII., and were evidently in the fourteenth century the owners of considerable property in Romney Marsh, where they maintained a game of Swans.

NOTES ON BRITISH RECORDS OF THE SPOTTED EAGLE AND STEPPE BUZZARD AND ON THE BRITISH TAWNY OWL.

BY

H. F. WITHERBY.

THE SPOTTED EAGLE (*Aquila clanga*).

WHILE there is no clear proof that the Lesser Spotted Eagle (*A. pomarina*) has ever occurred in the British Islands, some of the records of Spotted Eagles are so wanting in essential details that it is impossible to say to which species they refer.

In the hope that further information may be forthcoming, or, better, that the doubtful birds may be sent for examination, I have discussed each record below. It seems to be generally supposed that the two species can always be separated by size, but unfortunately the measurements of males and females overlap, and in several cases the sex has not been ascertained. The considerably darker coloration of the upper parts of *A. clanga* at all ages, and in immature examples also the larger spots on the mantle than in *A. pomarina* are the best guides. There are also differences in wing formula, but for this one must make certain that the wing-feathers are not in a state of moult, which is not so easy in a stuffed bird. The following are the recorded occurrences:—

1st, Immature bird, sex not stated, January 1845, shot near Youghal, Ireland, and now in the Museum of Trinity College, Dublin. Two were shot, but apparently only one preserved. Mr. Ussher (*Birds of Ireland*, p. 125) states that the wing measures $19\frac{3}{4}$ inches (= 502 mm.), but gives no further details. The size might refer to either species, depending upon the sex. Newton (Yarrell, 4th ed., 1, p. 20) gives a figure of this bird from a coloured drawing sent to him by Mr. R. Davis, but this is not conclusive though the figure is more like *A. clanga*. This bird should be carefully examined.

2nd, Male, immature, December 4th, 1860, captured in Hawk's Wood, Trebartha, between Hawk's Tor and Kilmar Tor in eastern Cornwall (E. H. Rodd, *Zool.*, 1861, p. 7311).* Rodd gives a good description which points to the bird being *A. clanga*, and the size of the wing "from carpal joint to the end of the longest quill-feather (5th), 1 ft. 8 in." (= 507 mm.) is larger than any male *A. pomarina* I have measured.

* Murray A. Matthew subsequently wrote (*Zool.*, 1861, p. 7380) that three years before Mr. Heaven had shot a Spotted Eagle on Lundy Island, but in his *Birds of Devon* he places the species in square brackets and states that the bird rolled over the cliff, fell into the sea, and was lost. From some feathers picked up it was thought to be of this species.

3rd, Sex not stated, immature, November 1861, shot near St. Columb, Cornwall (*id.*, *t.c.*, p. 7817). Unfortunately the sex is not given and only the length of the bird, which is useless. From the description, in which it is stated that the yellow spots over the back and scapulars are even more predominant than in the 1860 example, it is evident that this bird was also *A. clanga*. In his *Birds of Cornwall* (p. 5), Rodd states that this bird is in the Truro Museum, while the first appears to have been in his own collection. With reference to these two examples, the late J. H. Gurney (senr.), an authority on the Accipitres, stated in the *Ibis* (1877, p. 332), that he had examined them both and found them to be examples of *A. clanga*. Dresser also examined the one at Trebartha and came to the same conclusion, stating that it is a "very dark boldly-spotted bird" and adds that the St. Columb specimen in the Truro Museum had been destroyed by moth! (*Zool.*, 1885, p. 230.)

4th, Male, December 28th, 1861, shot near Somerley, near Ringwood, Hants. (Wise, *New Forest*; Kelsall and Munn, *Birds of Hants.*, p. 152; Saunders, *Manual* 2nd ed., p. 325). Unfortunately no details are given, but the bird is in the collection of Lord Normanton at Somerley and should be critically examined.

5th, One is stated to have been picked up dead on Walney Island, Lancashire, and examined by Mr. W. A. Durnford, in 1875, but there are no further particulars and it seems doubtful if the bird was preserved (*Birds of Lancs.*, 2nd ed., p. 125.)

6th, Sex not given, immature, shot October 31st, 1885, at Cresswell, Northumberland (Saunders, *loc. cit.*, and G. Bolam, *Birds of Northumberland*, p. 273). Mr. Bolam examined this bird which was "deep rich brown conspicuously spotted with creamy white." He gives the wing measurement as $20\frac{1}{2}$ inches (= 52 cm.), which is larger than any *A. pomarina*, even a female, and from this and the description of the colouring and spots, there is no doubt this bird is *A. clanga*.

7th, 8th and 9th, In October and November 1891, three or more Spotted Eagles were reported in Essex and Suffolk, as follows:—One caught October 29th, at Elmstead, near Colchester (H. Laver, *Zool.*, 1891, p. 470). Male immature, shot November 4th, at Sudbourne, Wickham Market, Suffolk. Another bird had been seen in its company (Pratt and Son, *t.c.*, 1892, p. 25). Another immature bird was shot at Leigh, Essex, on November 3rd (Miller Christy, *t.c.*, 1892, p. 76). Mr. Miller Christy also states (*Vict. Hist. Essex*), that an Eagle seen about Bardfield, throughout the following December,

was also probably of this species. Of the three obtained the Suffolk example is now in the Norwich Castle Museum, and Mr. Gurney, who has very kindly examined it carefully, informs me that it is quite a young bird, very dark and heavily spotted right up to the occiput and that he has compared it with skins of *A. clanga* and *pomarina*, with the former of which it agrees. It cannot be measured accurately as it is unfortunately a stuffed bird in a sealed glass case. The specimen captured at Elmstead, Mr. Miller Christy states (*Zool.*, 1892, p. 76) is in the collection of the Hon. W. Rothschild, but it is not now at Tring and neither Lord Rothschild nor Dr. Hartert have any recollection of it. Mr. Christy (*l.c.*) gives the measurement of the wing of the Leigh bird as 19 inches (= 482 mm.) which, if correctly measured, is too small for *A. clanga*. Of the Elmstead specimen Mr. Laver remarked "from its size and markings it corresponds with Mr. Howard Saunders's description of the small northern race." It seems certain, however, that all these birds came over together and it would be strange if the Suffolk bird were *A. clanga* and the Essex ones *A. pomarina*. It is important, however, that the Essex birds, if accessible, should be critically examined.*

10th† Female, immature, picked up wounded November 15th, 1915, at Brinsop Court, Hereford (W. R. Ogilvie-Grant, *British Birds*, IX., p. 186). This is in the British Museum collection and is undoubtedly *A. clanga*.

THE STEPPE BUZZARD (*Buteo b. desertorum* auct.‡)

This bird, which has been inappropriately termed the African Buzzard and the Desert Buzzard, also (by Jerdon) the Harrier Buzzard, as well as more appropriately the Steppe Buzzard, was referred to in our *Hand-List* (1912) in a note, but should have been definitely included in the

* Mr. Miller Christy is, unfortunately, unable to give me further information about these Essex birds owing to his books and papers being at the present time inaccessible to him.

† A Spotted Eagle captured in the North Sea about 140 miles from the Norfolk coast on October 17th, 1907, was sent to the Zoological Gardens and identified as *A. maculata* (= *A. clanga*) (J. H. Gurney, *Zool.*, 1908, p. 131). Mr. Jourdain informs me that Mr. W. R. Lysaght's collection at Castleford, Chepstow, contains a male and female Spotted Eagle with three nestlings, and in a footnote it is stated (Catalogue p. 79): "All (respectively) shot and taken in England." No further details are given. There is, of course, no reason to suppose that these birds have ever bred with us, but the adults might possibly turn out to be among those I have been unable to trace.

‡ The name *desertorum*, which is founded upon Levaillant's figure, cannot be accepted, as the bird depicted is quite unlike this species or, indeed, any other! The next oldest acceptable name appears to be *Buteo vulpinus* of Gloger.

list. The specimen in the British Museum collection killed at Eversleigh (Wilts) in September 1864 by J. Clarke Hawkshaw and recorded by Gould (*Birds of Great Britain*, Vol. I., p. xxx.), has a good history, and is no doubt an example of this form. Its upper-parts are broadly edged rufous, tail tinged rufous and under parts with the centres of the feathers brownish-rufous, under tail-coverts and axillaries barred rufous, the under-parts being more rufous than any example of *Buteo b. buteo* that I have seen. The bird is unsexed, but its measurements are small even for a male *B. b. buteo*, viz., wing 363 mm., tail 200, tarsus 76; bill 20. Other specimens in the British Museum, which Mr. H. Kirke Swann considers to be referable to this form or *B. b. zimmermannæ* (*Synop. List Accipitres*, p. 44), are, I consider, *B. b. buteo*.

A male obtained at Bywell, near Newcastle, in 1830, and a male from Tynemouth, November 1870, were stated by the late J. H. Gurney (senr.) to have been of this form (*Ibis*, 1878, p. 118). By the kindness of Mr. E. Leonard Gill and the authorities of the Hancock Museum, Newcastle, we have been able to examine the Bywell specimen, but the Tynemouth bird Mr. Gill says he is unable to trace. The Bywell example is absolutely typical of *Buteo b. buteo* in colour, but the wing is very short, measuring only 355 mm. But the bird is in moult, and the fourth primary in each wing is only about a quarter grown and is hidden by the other feathers. In the Common Buzzard, although the third primary is sometimes as long as the fourth, it is sometimes as much as 15 mm. shorter. If 15 mm. is added to 355 we have 370, and considering also the worn state of the old third primary in this bird I think there can be no doubt that this is an example of the typical form *Buteo b. buteo*. The late J. H. Gurney was evidently misled by the size of the wing, and did not notice that the bird was moulting. At present, therefore, the inclusion of the Steppe Buzzard in the British List must rest upon the Wiltshire specimen of 1864.

THE BRITISH TAWNY OWL (*Strix aluco sylvatica* Shaw).

In the next part of the *Practical Handbook*, shortly to be issued, it will be seen that the separation of the British Tawny Owl from the Continental form is adopted. The British bird is distinguished from the typical form by its smaller size: wing, males, British 245–270 mm., Continental 265–290 mm.; females, British 255–275, Continental 270–305. Also in the British form the grey "phase" is very scarce, while in the typical form grey birds are more frequent than tawny ones.

NOTES

NOTES FROM LEICESTERSHIRE.

RAVEN (*C. corax*).—Mr. J. Freeman, who knows the bird well in a wild state, saw a Raven at Wanlip in November 1919.

WILLOW-TIT (*P. atricapillus kleinschmidti*).—In November 1919 I shot a pair of Titmice at Queniborough, one of which I submitted to Mr. H. F. Witherby, who informs me that it is a Willow-Tit. This is, I believe, the first record of this species from Leicestershire.

SWALLOW (*H. r. rustica*).—First seen at Wanlip on March 27th, 1920.

CUCKOO (*C. c. canorus*).—First seen at Queniborough on March 31st, 1920. Both of these are unusually early dates for the Midlands.

HOBBY (*F. s. subbutco*).—A male was trapped by a keeper at Queniborough on July 5th, 1920.

COMMON BUZZARD (*B. buteo*).—One, by its size a female, was seen by myself and keeper at Barkby Thorpe on May 1st, 1920. It passed quite close to us, flying low in a strong wind.

HEN-HARRIER (*C. cyaneus*).—Four were seen some few miles from Queniborough in September 1920, and one of them, which had been shot, I examined on the 23rd, and found to be an immature male.

MANX SHEARWATER (*P. p. puffinus*).—A male was picked up dead in Humberstone village on October 3rd, 1920, and examined by me on the next day.

COMMON SANDPIPER (*T. hypoleuca*).—During the first week of May 1920 I saw a migratory party of twenty along the River Soar, at Wanlip.

GREEN SANDPIPER (*T. ochropus*).—On September 15th, 1920, one flew close by me at Queniborough and another was shot at Measham, during the first week in October, while several others were seen on Gadesby Brook and at Barkby Thorpe.

CURLEW (*N. arquata*).—Mr. J. Freeman saw six Curlews pass over Thurmaston, calling repeatedly, about the end of September 1920.

WHIMBREL (*N. phæopus*).—When walking along the brook at Queniborough on September 9th, 1920, I saw three Whimbrel, which passed quite close to me, and on the next day a single bird flew overhead, calling several times.

W. HUBERT BARROW.

CONTINENTAL JAY IN KENT.

ON November 6th, 1920, I shot a specimen of the Continental Jay (*Garrulus g. glandarius*) at Fairhill, between Tonbridge and Sevenoaks. Records for Kent, particularly the west of the county, appear to be not numerous. P. A. BUXTON.

BRAMBLINGS IN WESTMORLAND.

THE Brambling (*Fringilla montifringilla*) is not usually a very abundant or regular visitor to the Lake District, it is therefore perhaps worth recording that large numbers have been present this autumn (1920), no doubt attracted by the exceptionally good crop of beech-mast, which seldom ripens in this neighbourhood. The birds were first noticed on October 20th, a flock of twenty or so, and thereafter in increasing numbers until on November 9th a very large assemblage was seen. They were wild and restless, and it was difficult to make a satisfactory estimate of their numbers, but I have little hesitation in saying that there were not fewer than one thousand, possibly far more. A. ASTLEY.

LATE STAY OF YELLOW WAGTAIL.

IN *British Birds*, Vol. X., p. 269, I recorded a Yellow Wagtail (*M. f. rayi*) seen at Alston, Cumberland, on November 1st, 1916, but that record has been eclipsed to-day (November 30th, 1920). Walking up to the village this morning, I was astonished to see a female fly into one of the small enclosures close to the houses. It had for companions on the grass a couple of Mistle-Thrushes and seven Magpies. The morning was bright and frosty after two or three days of wet, muggy weather, but later in the day it clouded over and turned wet again; I was then out on the high fells grouse-driving and the only non-game birds seen during the day were several Snow Buntings, a Raven, and some Hooded Crows—nothing unusual about these, but scarcely the sort of birds one expects to see on the same day as a Yellow Wagtail! Alston, it may be added, stands 1,000 feet above the sea.

GEORGE BOLAM.

ON December 4th, 1920, I saw a Yellow Wagtail on the shore of Bassenthwaite Lake, Cumberland. There was no mistaking the species, for I watched it through glasses from a very short distance for several minutes, while it strutted about near the edge of the water.

H. A. BOOTH.

GREY WAGTAIL BREEDING IN SUSSEX.

TWO pairs of Grey Wagtails (*Motacilla c. cinerea*) bred on a stream near Battle, within half a mile of each other, in 1920.

The young in both cases were seen out of the nest with the parents and both nests were found, one on the face of the stream bank, the other in a hole in the brickwork connected with a sluice-gate.

HUGH WHISTLER.

[Cf. *British Birds*, II., p. 376 and VI., p. 18.—EDS.]

MIGRATORY WHITE WAGTAILS IN YORKSHIRE IN AUTUMN.

ON September 23rd, 1920, a friend and I visited the ruins of Egliston or Egglestone Abbey, about two miles south of Barnard Castle, on the Yorkshire side of the Tees, and there I saw three White Wagtails (*Motacilla a. alba*) running about on the turf within the enclosure, one of which had an entirely grey crown. On my return home I looked up this species in Nelson's *Birds of Yorkshire* and found it stated (p. 124) that so far this bird had entirely escaped observation in Yorkshire during the autumn migration.

This fact is a surprising one to me, for on the sewage outfall works, at Ewood Bridge, near Rawtenstall (E. Lancashire), less than ten miles from the Yorkshire border, I have seen migratory White Wagtails every spring and autumn, and as a rule more in autumn than in spring, for several years. The regularity of their appearance along with that of many Pied and Yellow Wagtails (*M. a. lugubris* and *M. f. rayi*) seems to suggest something of a fly route, and I have supposed that in spring they were making for the Ribble Valley and that those seen in autumn had come to the sewage works by that route; though of this I can give no proof beyond the observed direction of the flight of travelling parties, which is as a rule towards the Whalley Gap—a great southern gate to the Ribble country. To me it appears probable that if observers who know the bird and live in the neighbourhood of the Yorkshire Ribble would keep a good look out at the migratory seasons they would find White Wagtails there.

C. K. PARKER.

MALE WHINCHAT MATED TO TWO FEMALES.

ON May 30th, 1917, I flushed a female Whinchat (*Saxicola r. rubetra*) on a hillside near the Bowland Forest district, in Lancashire, and was greatly surprised to find a nest containing twelve eggs. I retired and watched closely for an hour or so, during which time the female returned to the nest, whilst a male and another female approached. The male visited the nest, but during the time I was able to stay the other female, whilst remaining near it, never actually visited it. It certainly

appeared to be a case of bigamy, and I greatly regretted not being able to visit the nest again to see if the other female also frequented it.

J. WILCOCK.

BLACK REDSTART IN DORSET.

IN *British Birds*, Vol. IX., p. 184, I recorded the occurrence of a pair of Black Redstarts (*Phœnicurus o. gibraltariensis*) during six consecutive winters on the Parish Church at Blandford. From 1915 to 1919 I was not living in the town and so cannot say if they continued their visits, but being in the town in the latter part of October 1919 I kept a look-out and believe I caught sight of a single bird in the same place. On October 30th, 1920, a female or a bird of the year put in an appearance and took up its position on exactly the same points and corners of the masonry which were used by the birds during their visits from 1910-1915.

Altogether I have only met with this species in six different localities, and in five cases out of the six the birds were seen on church towers. The choice of such a situation is, no doubt, owing to the food supply, the sunny walls attracting numberless flies, and providing a happy hunting ground free from disturbance.

If observers would look out in November for the appearance of this bird on church towers or other lofty buildings, it may be discovered to be less uncommon than supposed. I am not aware of a single record for Dorset since the publication of my previous note, so that the recurrence of the bird on Blandford church tower is, I think, worthy of another record.

Since writing the above I spent a morning examining the church towers of Bournemouth, which resulted in one bird (a male) on St. Peter's Church. It was in the same place again on November 22nd.

W. J. ASHFORD.

LATE STAY OF NIGHTJAR AND WRYNECK IN SUSSEX.

WHILE shooting at Ninfield, on October 7th, 1920, a Nightjar (*Caprimulgus eu. europæus*) was put up twice in some low coppice, and on the 5th a Wryneck (*Jynx t. torquilla*) was flushed from a wheat-stubble above Fairlight cliffs.

HUGH WHISTLER.

LATE BREEDING OF BARN-OWL.

ON November 5th, 1920, at Eton, Bucks., I found three young Barn-Owls (*Tyto a. alba*) in a large hole in an elm tree about thirty feet from the ground. One of the parent birds had

left the hole a short time before I explored it, while the young for some days and nights had been heard "snoring" by people passing along the main road, which runs but ten yards from the tree. Two of the young were, as far as I could judge, about four weeks, and the third about three weeks old.

A. MAYALI.

[As nests of the Barn-Owl with eggs or young have been found in every month of the year (with, I believe, the sole exception of January, in which month I have no record) from September to March, as well as in spring and summer, it is difficult to distinguish late from abnormally early breeding. Some further information on the subject will be found in a note by Mr. Miller Christy (*British Birds*, VII., pp. 265-6) and it is interesting to note that winter breeding has also been recorded on the Continent and in the United States, so that the habit is not confined to the white-breasted race.

F. C. R. JOURDAIN.]

GLOSSY IBIS AND AVOCET IN CO. WEXFORD.

AN immature male Glossy Ibis (*Plegadis f. falcinellus*) was shot in co. Wexford, on October 20th, 1917, and on November 20th, 1917, an adult male Avocet (*Recurvirostra avosetta*) was killed at Tacumshane Lake, Broadway, co. Wexford. Both were received by Mr. Williams, Dublin, and the Avocet, a very beautiful bird, passed into my possession.

I must apologize for the belated appearance of these records, but the note got mixed up with some other papers.

C. J. CARROLL.

GADWALL IN ESSEX.

ON November 7th, 1920, I observed two Gadwall (*Anas strepera*) on the lake in Navestock Park, Essex. Strangely enough there were no other ducks on the lake at the time; although Coots (*F. atra*) were numerous. The only record I can find of this species in the county since *The Birds of Essex* was published in 1890 is that of one obtained at Manningtree in December 1913 (*British Birds*, VII., p. 323), and Mr. Miller Christy (*Vict. Hist. Essex*) describes it as a very scarce winter visitor.

WILLIAM E. GLEGG.

MANX SHEARWATER BREEDING ON INISHBOFIN, CO. GALWAY.

ON June 13th, 1920, while staying on Inishbofin, I was shown the nesting-hole of a Manx Shearwater (*Puffinus p. puffinus*). It was high up in a steep grassy slope, on the north side of the island. Having climbed up to it, I found

the old bird sitting on a single egg, which was quite fresh. I caught the bird in my hand, and was able to identify it without any doubt. I could not see any other birds on the island, and though I found several disused burrows, in which, I was told, they had bred in previous years, none of them were occupied this year.

This appears to be the first record of the Manx Shearwater breeding on Inishbofin. H. B. COTT.

RATE OF PROGRESS OF GREAT CRESTED GREBE UNDER WATER.

It is not often that opportunity offers for the accurate computation of the rate at which a diving bird progresses under water; the following note may, therefore, be of interest.

During a sojourn in Lincolnshire in October 1920 I came upon a Great Crested Grebe (*Podiceps c. cristatus*) in the river Glen, where that stream flows straight and sluggish as a canal through the fen country, enclosed by high embankments on either flank, and destitute of weeds or obstruction on the surface as far as the eye can reach. There was no difficulty in getting right on top of the bird, so to speak, nor in following it as far as one listed. This I did for about half an hour, timing the dives by watch and stepping the distance (and I think I may claim to be able to count yards very accurately in that way), and I was surprised at the very slight variation that occurred either in the length of dive or the time it occupied. The bird was followed in either direction it chose to take, and twenty dives did not vary more than three yards in length, nor four seconds in duration; the mean being 77 yards and 58 seconds. I quite expected that both speed and distance covered would have been greater. The bird, I may add, was an adult, and, though naturally doing its best all the time, it showed little signs of fatigue when I left it, and was very rarely at all flurried. It was never noticed to open its wings under water, nor did it once forbear to raise its whole body to the surface, even when it was forced to come up within a few yards of me. For the most part I walked along the top of the bank, some 30 feet above the water, but occasionally descended to the water's edge to get the Grebe at closer quarters. GEORGE BOLAM.

LITTLE AUK INLAND IN WESTMORLAND.

On November 20th, 1920, a specimen of the Little Auk (*Alle alle*) was captured by a cat at Ambleside, and was

brought to me the same day for identification. It had no doubt been driven inland by the severe gale of a few days previously.

A. ASTLEY.

BROODING PRIOR TO LAYING.

IN May 1871 I put a Green Woodpecker (*Picus viridis*) from a new hole in a crab-tree in Epping Forest. There were no eggs, and I do not think that the bird was either roosting (it was a sunny afternoon) or at work upon the hole. Fourteen days later I again saw the bird leave the hole, which contained a freshly-picked dandelion only. I do not think the hole had altered during the fortnight I let it alone.

H. M. WALLIS.

[With Green Woodpeckers there is frequently a very considerable period between the apparent completion of the nest-hole and the laying of the first egg, and during that time the bird may be often found in the hole, but whether engaged in putting finishing touches to its interior, roosting, or engaged in premature brooding, it must be very difficult to determine.—EDS.]

STATUS OF CIRL BUNTING IN WARWICKSHIRE.—Mr. T. Ground kindly communicates the following note by the late A. Geoffrey Leigh: "The Cirl Bunting (*Emberiza cirrus*) is strictly confined to a part of the southern division of Warwickshire. Mr. R. F. Tomes (*Vict. Hist. of Warwick.*, I., p. 196) states that it is most frequent in the Avon valley, and instances the neighbourhood of Stratford-on-Avon, adding that it has occurred rarely at Leamington. This marks the eastern and northern limit of its distribution, with the exception of one breeding record from Great Alne about 1882 (*Zool.*, 1892, p. 122). Farther south it appears to breed irregularly over the lower slopes of the Edgehills. Mr. Aplin records (*loc. cit.*) its occurrence at Idlicote in 1882 or 1883 and a male at Brailes on June 13th, 1884.

"On May 14th, 1914, I saw two males and two females between Combrook and Butler's Marston, the only occasion on which I have met with the species in the county. One of the males was carrying food."

SWALLOWS IN DECEMBER.—Captain C. R. S. Pitman, D.S.O., informs us that at midday on December 10th, 1920, a Swallow (*Hirundo r. rustica*) was hawking for insects up and down the road from Paignton to Torquay, after a bitter night and white frost in early morning. In the *Field*

(Dec. 18th, 1920, p. 856) Mr. J. S. Pratt states that he saw a Swallow at Worthing on December 6th.

THE ALTITUDE OF MIGRATORY FLIGHT.—In connection with our notice (*antea*, p. 165) of Col. R. Meinertzhagen's paper on this subject, Mr. H. M. Wallis writes that while at sea on August 2nd, 1914, off Boston Deep and out of sight of land, he saw at 10.30 a.m. a red Homer approaching the ship from the westward, flying rapidly just above the tops of the waves. It rose to pass between the masts of the ship and then dropped to its former level and continued on its course due east. A second similar bird appeared soon after, but, being drenched with rain, settled on the ship, where it remained all day. This interesting observation shows that, though trained to find their way by sight, a non-migratory species like the Homing Pigeon can assume and keep a course at such an altitude that sight can be of very little use to it.

LETTERS.

NESTLING DOWNS OF HAWKS.

To the Editors of BRITISH BIRDS.

SIRS,—From Mr. Witherby's comments (*antea*, p. 154) on my *Ibis* paper (October 1920), it is abundantly evident that the terms applied to the study of feathers are not sufficiently precise. In my definition of the word "plumulæ," I describe it as "the small downy feathers found in the adults of many birds." This being the case, I was certainly wrong in loosely referring to the second generation of down in young Hawks and Falcons as plumulæ. In order to be exact this second generation of downy feathers requires a name—a term corresponding to mesoptile in the pre-pennæ group of feathers. Mr. Witherby is quite right when he points out that this second generation of down is longer and coarser than the ultimate growth of plumules, but his experience differs from mine in regard to its colour. Although it is drab or slightly dusky in some species examined by me (i.e., *Milvus* and *Circus*), according to my notes in the majority it is white or whitish (i.e., *Falco*, *Aquila* and *Circæetus*).

A fixed and definite nomenclature for the successive growths of feathers is badly needed. In some birds, more or less perfect adult feathers are acquired at once, whereas in others two or three successive generations of structurally distinct feathers may be noted. Moreover, further to complicate matters, in some species—the Hawks, for instance—there appear simultaneously successive generations of what ultimately develop into two quite distinct types of feathers: Teleoptiles and Plumules. True, Mr. Pycraft has made an attempt to classify what might be termed the Pennæ Group, his names being respectively for the first, second and third generations: Protoptile, Mesoptile and Teleoptile. The chief objection to this system of

nomenclature is that we are seldom sure, when there is only one growth of pre-pennæ, whether it belongs to the so-called first or second generation. Pycraft believes that it is always the Protoptiles that have been suppressed in such cases but, as I have pointed out (*Ibis*, October 1920, pp. 857 and 875), some of the Raptoreæ indicate that it is, at least occasionally, the second and not the first generation that has disappeared. A way out of this difficulty would be to form a retrogressive system of nomenclature starting from the final "adult" plumage—such as Pennæ, Pre-pennæ and Ante-pre-pennæ. These are admittedly clumsy names but they have the merit of being self-explanatory. Similar prefixes could, of course, be applied to the plumulæ series.

COLLINGWOOD INGRAM.

BROODING PRIOR TO LAYING.

To the Editors of BRITISH BIRDS.

SIRS,—In the December issue of *British Birds* (p. 159) there is a very interesting note, by Mr. J. H. Owen, on the above, but I am reluctant to accept his diagnosis of the two cases cited.

Undoubtedly such brooding does occur at times, but *only extends over a short period*, and is carried on at short intervals, *i.e.*, the bird remains on the nest for a few hours at a time.

It should not be confused with the "brooding" of very old birds incapable of further egg-production. Such birds—quite commonly—build orthodox nests and brood in them for days, sometimes for weeks, until gradually, in some instances suddenly, they desert them altogether.

These barren birds are not uncommon amongst the Corvidæ and Raptoreæ—two long-lived families.

Until recently I have been familiar with such a pair of Ravens in a mountain of this county. Annually the nest was built and comfortably lined, when the female would begin to "sit," but after a period of "brooding" she would leave the empty nest, and go off foraging again with her mate. Once I got to within a few feet of this old hen, which, disregarding the male's harsh, warning calls, just stood up in the nest to watch me, croaking all the time.

Both the instances given by Mr. Owen should, I think, be attributed to barren birds. No eggs were laid and the Rook, he says, deserted after a fortnight's "sitting," while the Hedge-Sparrow remained on *even longer* before finally departing.

C. J. CARROLL.

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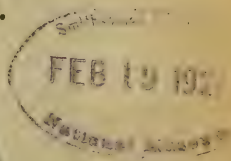
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THE AVOCET AT HOME.

BY

E. L. TURNER, Hon.M.B.O.U.

No one can do justice to the charm of the Avocet (*Recurvirostra avosetta*) or adequately describe the beauty and grace of its varying attitudes. It is a creature of emotions—easily roused to anger, but on the whole sociable and confiding. As, however, most of my observations were made in a protected area, the subjects of these notes had little cause for fear.

Anger is expressed in two ways. If the Avocet when paddling about in the water suspects you of designs upon its nest, it lowers its head and rushes towards you with expanded wings, swaying to and fro, so that first one wing and then the other just touches the water. The bird may then rise and fly straight at you, but, as a rule, it retreats with the same swaying movements, apparently with intent to lure you from the nest. Sometimes it will paddle round almost at your feet, floundering and struggling in the water, feigning injury. The same manœuvres are carried out on dry land, but then the bird puts even more energy into its attempts to distract your attention.

The Avocet's second method of attack is suddenly to fly at you with tremendous speed, hurling itself through the air, steeply banked with its wings almost vertical and its long legs hanging down, while the head is held lower than the shoulders and the curved bill points aggressively upwards. This steel-blue scimitar would be a dangerous weapon if it were not so slender and flexible. The Avocet's bill always reminds me of Saladin's magic sword—"A curved and narrow blade which glittered not like the swords of the Franks, but was, on the contrary, of a dull blue colour, marked with ten millions of meandering lines which showed how anxiously the metal had been welded by the armourer." This weapon may be useful to the Avocet when fighting with his kind, but he knows that it is useless against the arch-enemy—man. So, at the last moment, when the bird is within a few inches of your head, it sheers off, describes a wide circle, and returns to the attack. This manœuvre may be repeated several times; but if such a valiant display of courage fails to move you, the Avocet falls to the ground, spreads itself out flat with extended, quivering wings, and writhes as if in agony. Meanwhile the air is rent with wild cries.

If an Avocet's anger is directed against another bird, a

fierce fight often ensues, for it is decidedly pugnacious at times. Terns and Black-headed Gulls were often subjected to attacks. In fact the irascible Avocets were constantly picking quarrels with the Terns amongst which they nested. Their movements are so sudden and swift that when fighting amongst themselves or with other birds, they appear to be an indistinguishable mass of feathers. I could not see whether the Avocet used its bill or its feet in the attack ; but from



AVOCET.
Meditation.

(Photographed by E. L. Turner.)

the angle of flight and the way in which the head is lowered, possibly they let drive with the full force of their shoulders.

The Avocet is a sociable bird, frequently nesting in colonies, or amongst other waders. It is decidedly interesting and amusing when nesting with its congeners, as its social qualities can then have full play ; moreover, it is not always quarrelling. When the females are brooding, the males who are off duty form a kind of club in the shallows. They stand in little groups and all talk at once, thus making a continuous chattering noise. A great deal of bowing and posing, and running round each other takes place, and a variety of

beautiful attitudes are assumed. In fact the Avocet is almost as self-conscious as the Ruff, and these social gatherings seemed mere occasions for a display akin to that of the Ruff. They begin peacefully, but often end in squabbles; sometimes only two birds disagree, but occasionally there is a free fight. In a dull diffused light these gatherings of Avocets are specially beautiful. The tall birds with their long shadows reflected in the water make a wonderful picture. There is a quaint solemnity about their attitudes and general proceedings to start with, but when they get convivial the spell is broken; the shadows become distorted owing to rapid changes of position and the silver mirror is soon dulled with the scurrying of many feet.

On the whole, a colony of Avocets is fairly quiet when undisturbed, though the air is full of subdued sound. They pay no attention to the men who are working on the land adjoining their nesting area, but the appearance of a stranger is the signal for a great uproar. The colony rises in a mass, together with the Terns, and a loud clamour ensues; if, however, you efface yourself, the angry tumult ceases, the birds soon settle down, and nothing is heard but the soft murmuring of many voices.

The Avocet's call-note is a flute-like "Kluit, kluit," capable of varying modulations, and increasing in volume as danger threatens. The Dutch name for the Avocet is "Kluit," so named from this, its ordinary call-note. When fifty or sixty birds are all shouting together the note sounds strident, but when whispered to the young, it is the softest possible music; you can hear the old birds crooning to the newly-hatched nestlings, as they cover them in sheltered nooks. Another note, which seems to be a warning call to the young, is a reedy "Koek, koek." The Avocet also makes a curious moaning sound akin to that of the Eider drake. This note evidently expresses happiness and contentment. The memory of it recalls visions of stately Avocets standing at ease in sunlit pools, while the young ones play around.

When feeding, the Avocet prefers water that is only four or five inches deep. There is something about their long swinging stride and rapid rhythmic movements that reminds one of men mowing. The body is bent downwards, the bill sweeps the water from side to side, keeping time with each stride; in this manner they scoop up minute crustacea, aquatic insects and their larvæ, besides a certain amount of algæ.

My first introduction to an Avocet colony was on May 17th,

1920; the birds were then brooding, though a few nests contained eggs which were chipping. We had passed several pairs nesting on the meadows, but my host hurried us on, cheering us with promises of a treat in store. I shall never

FEB 19 1921



AN AVOCET FEEDING.

(*Photographed by E. L. Turner.*)

forget the thrill of delight we experienced when a turn in the path suddenly revealed this hidden colony. The Avocets rose in a mass as we approached, and at once proceeded to attack us. I, who had never seen one before that day, suddenly found myself surrounded by these wonderful birds.

My companion, after some moments of breathless silence, remarked in ecstasy: "I don't care if I die now; I never guessed it would be like this!" Terns added their cries to the general uproar. Godwits screamed, and fussy little Kentish Plover scurried over the mud. A solemn group of Oystercatchers, about fifty in number, remained silent and motionless; it was the hour of their evening meditations. These wary old birds eyed us with alert intelligence, but maintained a dignified and non-committal attitude.

The next day I took my first photographs of Avocets; it rained all the time, and the results were poor; it was, however, an intense satisfaction to me just to sit and watch the birds. I had the whole colony under observation, and my own bird in particular; for some minutes she stood near the nest, a beautiful picture of indecision, perfect in outline and exquisite in her dazzling white and black plumage. Now and again she lifted one slender steel-blue leg and held it flexed; after a few seconds this foot was firmly planted a little in advance of the other, and so by very slow steps she drew nearer. Her mate disapproved of this loitering and ran to and fro along a bank, with outstretched wings and a truculent air; finally he drove her to the nest. She moved away a few feet at the first click of the shutter, but after the first surprise nothing alarmed her. Rain fell heavily, and the wind rose—a combination of circumstances which induced the Avocet to sit tight. As both sexes incubate, I waited on, hoping to see the birds change places, but in this I was disappointed. The male in his eagerness to brood is said gently to insert his long curved bill beneath the female's body if she refuses to move.

It was a week before I could visit this colony again; by that time most of the Avocets had hatched off their broods, except those nesting on inaccessible islets with the Terns. The whole scene was changed. Numbers of small leggy chicks, in plumage resembling young Nightjars, were running about in the water. At first the young birds peck food directly from the ooze. The bill is short and almost straight, but there is a slight upward curve. As this seems to be a disputed point, I can only quote from my notes made on the spot. "Long steel-blue legs, slightly upcurved bill, with the egg-tooth still adhering."* I don't think I could have

* Since this article was in the press I have had a letter from Herr Jacob P. Thijsse confirming this statement. He says, "At first the bill may seem quite straight, but still there is a suggestion of a very slight upward curve. Perhaps we might describe the bill of the very young Avocet as 'tip-tilted.'"—E.L.T.

been mistaken, when the subject of this note was lying in the nest drying in the sun, within four feet of my tent.

After a week or so the young Avocet begins to practise scooping up his food. From their earliest stages they peck right and left, and seldom straight ahead; there is always, too, the swinging movement so characteristic of the adult. The young Avocets are the most delightfully independent youngsters and wander over a wide area in search of food. The



AVOCET.

Returning to the Nest.

(*Photographed by E. L. Turner.*)

parents mount guard at either end of a given area and allow the chicks a considerable amount of latitude, but if there is cause for alarm, a sudden call from either of the old birds is promptly obeyed by the scattered brood; they either run to their parents, or else make for the nearest cover. Like most young things, they prefer the companionship of their contemporaries. Occasionally a jealous parent suddenly dashes into the midst of a group of young Avocets and ruthlessly drives away any aliens. Either the Avocet's bill is not a very formidable weapon, or the young birds must be

very tough. These attacks were often of a very vindictive nature, and I expected to see a little victim done to death; but after a severe drubbing, the babe, though apparently half drowned, gets up and runs away. These attacks on the young are revenged by the parents and especially by the male, so that a fight generally ensues. Numbers of young do die, but whether as a result of this treatment I cannot say, but they get trampled on a good deal during these skirmishes between the adult birds.

The young leave the nests as soon as they are hatched, and many parents took their broods to the little drains which intersected the fields adjoining their nesting area; these drains are only one spit deep and just the width of a spade. Here the newly-hatched broods find food and shelter from the cold winds. One parent mounts guard alongside, while the other crouches over the young in the drain. Sometimes the little ones all stand beneath the old bird, which does not thus actually cover them, but often they were completely covered for hours. In a day or two, however, the nestlings are strong enough to face the world and form gay little family parties.

I had occasion to pitch a tent near a drain in which Avocets were hiding their young. The old birds attacked the tent in their usual manner, but, finding it unresponsive, they then ran round it, posturing in an absurd way and screaming loudly all the time. They repeated this behaviour at intervals, all one day, but eventually left the tent alone.

Avocets are fairly well distributed over Texel wherever there is suitable nesting ground. On May 25th I stumbled across an isolated nest in a meadow. The young were just hatching; two had left the egg and one was emerging. I hastily put up a tent and had just time to get three photographs. The young birds soon became lively. At first they were content to shelter beneath the old bird, and merely poked their heads up through her plumage, after the manner of young Grebes. Fifty yards away another Avocet was crouching in a tussock of thrift, with a brood of three chicks, hatched that morning. These youngsters were "feeling their feet" and revelling in the new and sunny world. A clean sandy track ran from the nest I was watching to the spot where this other group was playing. After a time, my bird walked off her nest, wandered sedately along the sandy path and squatted beside the one sitting in the tussock. Then she called, and her eldest chick ran out of the nest and joined her. Seeing the other three

babes, he soon made friends and played with them. His mother, however, returned to her nest after a short absence, looked round and called to her first-born ; but he found his companions more congenial society and paid no attention to her cries. In this instance the parents of the three chicks were quite friendly and did not attempt to illtreat the intruder. When my bird had successfully hatched out her brood she led them away, collected the truant, and wandered to the



AVOCET AND NEWLY-HATCHED YOUNG.

The first-born has joined his playmates.

(Photographed by E. L. Turner.)

edge of a dyke. She then flew across the dyke, calling loudly to the little ones. They—although one was barely an hour old—plunged unhesitatingly into the water, where they swam about in rather a distracted manner. The old bird leant over the bank and encouraged them with softly uttered “Kluits,” and “Koeks,” until they plucked up sufficient courage to climb the steep sides of the dyke. Then I lost sight of them, for they were immediately joined by the male and wandered away into the rough pastures. While

this Avocet was brooding, a Black Tern came flying low over the nest—not with any evil intent—she sprang at him, jumping straight from the ground into the air, about two feet. The male Avocet is very attentive to his mate and jealously guards the nest and young. He does most of the fighting, though both birds drive at any human intruder. I think it is the males only who meet in little companies to chatter and show off and fight.

Early in June I marked down an easily accessible family, which looked as if they could be photographed without much trouble, and such would have been the case, but for the male. Their feeding area was close to a spit of mud, just about large enough to take my tent. During the two days it was erected, the male stood, or walked up and down, six feet away and kept the young ones at a distance. Every time they wandered within range of my lens, he uttered a sharp “Kluit,” and mechanically they retraced their steps. But as soon as I took away the tent they all paddled inshore as usual. That was my last visit to the colony. I took leave of them and of their guardian, the Dutch farmer, and his family, very regretfully. We could not converse, but the farmer’s wife always anticipated my wants. Not the least delightful of my recollections is the tea which was always ready for me in the farmhouse kitchen, the men’s faces, half in shadow, with the fire-light playing upon them, and the pleasant, homely-looking women and children—all might have stepped out of the canvas of some sixteenth century Dutch Master.

THE "BRITISH BIRDS" MARKING SCHEME.*

PROGRESS FOR 1920.

BY

H. F. WITHERBY.

It will be seen from the figures given below that the number of birds ringed in 1920, which was the twelfth year of the "British Birds" Marking Scheme, was very satisfactory and the total shows that there is still plenty of interest in it. The Reports which I have recently published of results under the headings of various species† have demonstrated its value, and show that by persistent effort in ringing and the accumulation of records we may expect to gain a knowledge of the movements of individual birds, which will throw a flood of light on such questions as the dispersal of the young, whether the same winter quarters as well as the same breeding quarters are resorted to each year, whether young of the same brood reach the same place, at what age certain birds breed or attain their full plumage, the movements of partial migrants, and so on.

NUMBER OF BIRDS RINGED.

In 1909	..	..	..	2,171
„ 1910	..	..	..	7,910
„ 1911	..	..	..	10,416
„ 1912	..	..	..	11,483
„ 1913	..	..	..	14,843
„ 1914	..	..	..	13,024
„ 1915	..	..	..	7,767
„ 1916	..	..	..	7,107
„ 1917	..	..	..	6,926
„ 1918	..	..	..	5,937
„ 1919	..	..	..	3,578
„ 1920	..	..	..	5,276
Total				96,438

Mr. Mayall again heads the list of "ringers," as he did in 1919, but his total this year of twelve hundred and two is

* For previous Reports see Vol. III., pp. 179-182, for 1909; Vol. IV., pp. 204-207, for 1910; Vol. V., pp. 158-162, for 1911; Vol. VI., pp. 177-183, for 1912; Vol. VII., pp. 190-195, for 1913; Vol. VIII., pp. 161-168, for 1914; Vol. IX., pp. 222-229, for 1915; Vol. X., pp. 150-156, for 1916; Vol. XI., pp. 272-276, for 1917; Vol. XII., pp. 96-100, for 1918; Vol. XIII., pp. 237-240 for 1919.

† See Vol. XIII., pp. 269-271, 292-296, 307-312.

more than double that of last year, and the largest number he has ringed in any of the ten years he has been ringing. Mr. Robinson, another of our strongest supporters, is a most excellent second with seven hundred and sixty-two, while Mr. Bartholomew (four hundred and sixty-seven), Mr. Masefield (three hundred and two), and Miss and Mr. Blyth (one hundred and ninety-five) all old supporters, have done excellent totals. We are delighted to welcome back Dr. Joy who has for long been unable to do any ringing owing to illness. Mr. Appleby, Capt. Boyd, Mr. J. Madden, and Mrs. Patteson have again done most useful totals. Then we have to welcome as new to our list the following:—Messrs. J. F. Thomas, R. H. Brown, W. H. Thorpe, J. S. Elliott, W. Raw, F. J. Mitchell, Mrs. L. Marshall, Major W. W. Higgin, Viscount Cross and Mr. J. Wilcock.*

As in my last Report I did not give a list showing percentages of recoveries I do so now, but on comparison with former tables it will be seen that the percentages do not greatly differ. There is an increase in the Starling, Mallard, Shag and Snipe, and a slight decrease in most of the other birds. The small percentage of recoveries reported in the smaller migrants is understandable, but it must be remembered that these recoveries, although comparatively few, are almost always interesting. In this connection much more might be done and useful information gained by catching up Swallows when they return. The very small number of Sky-Larks reported has always been a remarkable feature and is difficult to understand.

SOME PERCENTAGES OF RECOVERIES.

Species.	Number Ringed 1909-19.	Number of these Recovered to date.	Percentages of Recoveries.
Starling	7,018	424	6.0
Greenfinch	2,792	26	.9
Linnet	1,301	15	1.1
Chaffinch.. ..	2,859	38	1.3
Sky-Lark.. ..	1,778	16	.8
Meadow-Pipit	1,265	18	1.4
Pied Wagtail	721	18	2.4
Spotted Flycatcher	795	1	.1
Willow-Warbler	1,872	13	.6

* Since these totals were in type I have received Dr. Moon's schedules which, owing to his prolonged illness, were delayed. Dr. Moon has ringed 239 birds, but these are not included in any of the totals and must be carried forward to next year.

Species.			Number Ringed 1909-19.	Number of these Recovered to date.	Percentages of Recoveries.
Whitethroat	..	..	457	3	.6
Mistle-Thrush	..	..	628	16	2.5
Song-Thrush	..	..	9,718	138	1.4
Blackbird	..	..	5,593	165	2.9
Redbreast	..	..	2,810	114	4.0
Hedge-Sparrow	..	..	1,865	42	2.2
Swallow	..	..	7,290	52	.7
Martin	..	..	1,784	13	.7
Sand-Martin	..	..	746	4	.5
Sparrow-Hawk	..	..	62	10	16.1
Heron	..	..	111	17	15.3
Mallard	..	..	644	143	22.2
Cormorant	..	..	563	88	15.6
Shag	..	..	166	17	10.2
Gannet	..	..	198	12	6.0
Wood-Pigeon	..	..	193	9	4.6
Lapwing	..	..	4,033	102	2.5
Redshank	..	..	298	14	4.6
Curlew	..	..	214	13	6.0
Snipe	..	..	214	18	8.4
Woodcock	..	..	348	44	12.6
Sandwich Tern	..	..	731	10	1.3
Common Tern	..	..	3,854	82	2.1
Black-headed Gull	..	..	11,961	517	4.3
Common Gull	..	..	514	14	2.7
Herring-Gull	..	..	512	17	3.3
Lesser Black-backed Gull	..	..	2,698	123	4.5
Puffin	..	..	905	1	.1

NUMBER OF BIRDS "RINGED."

MESSRS. A. MAYALL (1202), H. W. Robinson (762), J. Bartholomew (467), J. R. B. Masfield (302), Mr. and Mrs. R. O. and Miss A. Blyth (195), Messrs. N. H. & D. Joy (192), J. Appleby (153), Capt. A. W. Boyd (124), Messrs. J. F. Thomas (124), R. H. Brown (190), W. H. Thorpe (103), J. Madden (99), Mrs. Patteson (91), Mr. T. L. Johnston (88), Rev. E. U. Savage (81), Capt. H. S. Greg (76), Messrs. C. H. Stobart (66), J. S. Elliott (58), Miss B. A. Carter (57), Mr. H. Bentham (55), Miss M. Garnett (51), Mr. W. Raw (50), Lon. Nat. Hist. Society (43), Messrs. F. J. Mitchell (41), J. G. Maynard (40), Mrs. L. Marshall (38), Mr. H. J. Vaughan (38), Mrs. T. Hodgkin (36), Mr. E. de Hamel (35), Miss C. M. Acland (34), Messrs. C. F. Archibald (30), P. A. Burt (30), Major W. W. Higgin (27), Major A. H. Greg (26), Mr. J. A. Anderson (26), Rt. Hon. Viscount Cross (24), Mr. J. Wilcock (24), and many others who have ringed under twenty each.

	'09-'13	'14	'15	'16	'17	'18	'19	'20	Total
Rook ..	123	5	45	6	38	23	3	8	251
Jackdaw ..	52	33	26	23	29	9	4	7	183
Jay ..	19	7	4	—	—	6	—	5	41
Starling ..	4160	646	914	368	560	219	151	169	7187
Greenfinch ..	1156	344	190	382	254	260	206	187	2979
Twite ..	24	18	—	—	—	—	—	3	45
Redpoll, Lesser ..	72	22	1	37	—	4	—	3	139
Linnet ..	360	151	214	195	162	173	46	122	1423
Bullfinch ..	64	20	29	23	18	21	20	40	235
Chaffinch ..	1071	397	252	319	338	262	220	367	3226
Sparrow, House ..	437	17	7	3	—	—	—	2	466
Sparrow, Tree ..	150	14	7	4	9	4	17	20	225
Bunting, Yellow ..	216	32	47	32	47	62	29	41	506
Bunting, Reed ..	106	49	15	18	98	54	20	39	399
Lark, Sky ..	588	253	328	195	213	150	51	41	1819
Pipit, Tree ..	124	42	4	16	8	5	15	31	245
Pipit, Meadow ..	572	169	183	131	113	85	12	22	1287
Wagtail, Yellow ..	23	28	13	12	16	9	5	5	111
Wagtail, Grey ..	64	22	7	12	—	8	1	—	114
Wagtail, Pied ..	297	110	93	93	91	17	20	46	767
Tit, Great ..	591	67	65	10	16	16	8	26	799
Tit, Blue ..	562	70	3	12	11	5	—	6	669
Tit, Coal ..	71	7	10	—	—	—	—	15	103
Tit, Marsh ..	48	1	3	—	—	—	—	—	52
Tit, Long-tailed ..	36	1	1	3	—	—	—	—	41
Wren, G.-crested ..	32	—	1	7	—	—	1	1	42
Shrike, R.-backed ..	47	14	14	29	13	16	17	22	172
Flycatcher, S. ..	290	84	78	63	115	100	65	114	909
Chiffchaff ..	42	9	—	5	8	6	—	19	89
Warbler, Willow ..	813	271	257	123	146	154	108	206	2078
Warbler, Wood ..	66	9	—	2	—	18	3	34	132
Warbler, Reed ..	88	37	1	15	19	54	38	31	283
Warbler, Sedge ..	81	—	4	32	53	72	32	30	304
Warbler, Garden ..	62	9	15	16	9	1	14	55	181
Blackcap ..	30	23	23	12	17	9	—	21	135
Whitethroat ..	172	25	40	61	34	40	85	130	587
Whitethroat, L. ..	60	8	23	23	3	11	13	28	169
Fieldfare ..	85	—	—	—	—	—	—	—	85
Thrush, Mistle ..	255	85	98	91	45	33	21	33	661
Thrush, Song ..	3325	1818	1131	1500	680	789	475	621	10339
Redwing ..	35	4	1	2	—	—	—	—	42
Ouzel, Ring ..	51	22	—	8	—	3	1	—	85
Blackbird ..	2083	975	499	751	453	446	386	469	6062
Wheatear ..	70	57	23	17	8	17	—	11	203
Whinchat ..	127	69	53	26	54	65	17	55	466
Stonechat ..	92	30	2	12	—	—	—	—	136
Redstart ..	108	42	40	6	—	13	15	12	236
Nightingale ..	23	4	7	7	—	5	5	19	70
Redbreast ..	1237	471	249	263	244	204	162	299	3129
Sparrow, Hedge ..	847	269	228	193	140	98	110	185	2070
Wren ..	286	141	134	106	26	34	11	76	814
Dipper ..	73	23	17	10	5	11	5	8	152
Swallow ..	2244	734	896	720	1470	714	512	307	7597
Martin ..	478	275	198	208	401	137	87	87	1871
Martin, Sand ..	210	182	44	133	116	29	32	52	798

	'09-'13	'14	'15	'16	'17	'18	'19	'20	Total
Nightjar ..	21	9	2	6	7	2	2	6	55
Wryneck ..	54	31	22	34	25	29	—	17	212
Cuckoo ..	67	6	5	5	13	14	7	7	124
Owl, Long-eared ..	—	—	—	—	—	30	—	2	32
Owl, Barn..	43	9	14	3	6	—	1	5	81
Owl, Tawny ..	44	13	17	—	11	14	18	8	125
Kestrel ..	14	10	10	5	6	7	3	4	59
Hawk, Sparrow ..	40	11	4	5	—	2	—	5	67
Heron, Common ..	103	2	1	4	—	1	—	—	111
Sheld-Duck ..	38	2	9	—	—	—	1	21	71
Mallard ..	422	76	42	30	70	4	—	1	645
Teal ..	48	10	25	1	12	—	33	20	149
Wigeon ..	6	11	38	15	6	1	2	23	102
Duck, Tufted ..	25	15	22	3	—	—	—	—	65
Cormorant ..	348	122	—	—	—	21	72	—	563
Shag ..	42	114	—	—	—	—	10	—	166
Gannet ..	134	56	8	—	—	—	—	—	198
Shearwater, Manx	69	—	—	—	—	—	—	3	72
Wood-Pigeon ..	104	18	17	14	11	20	9	19	212
Dove, Stock ..	27	9	2	3	4	1	5	6	57
Dove, Turtle ..	33	4	11	10	3	8	7	5	81
Oystercatcher ..	47	31	6	—	7	3	6	4	104
Plover, Ringed ..	95	20	7	4	2	14	1	19	162
Plover, Golden ..	24	6	9	4	—	6	—	—	49
Lapwing ..	1824	1078	444	242	168	154	123	125	4158
Sandpiper, C. ..	104	23	13	20	7	25	16	13	221
Redshank ..	132	61	27	15	35	25	3	13	311
Curlew, Common..	128	39	9	10	7	17	4	14	228
Snipe, Common ..	101	44	6	13	28	19	3	6	220
Woodcock..	224	89	32	—	—	3	—	17	365
Tern, Sandwich ..	385	270	—	—	23	—	53	31	762
Tern, Common ..	2722	195	1	1	174	761	—	144	3998
Tern, Arctic ..	30	47	—	—	8	—	20	25	130
Tern, Little ..	164	9	—	1	—	1	—	9	184
Gull, B.-headed ..	11769	164	—	13	—	4	11	—	11961
Gull, Common ..	470	17	—	20	7	—	—	—	514
Gull, Herring ..	430	61	—	19	1	—	1	—	512
Gull, L. Blk.-bkd..	787	1317	214	219	—	84	77	471	3169
Gull, G. Blk.-bkd..	25	53	—	—	—	—	—	—	78
Kittiwake ..	17	16	—	—	—	50	1	—	84
Razorbill ..	36	24	—	—	—	4	—	5	69
Puffin ..	346	553	—	2	—	2	2	—	905
Moor-Hen ..	120	34	65	21	27	24	7	20	318

NOTE.—About fifty species, of which less than thirty individuals each have been ringed, are omitted from this list as also are game-birds and those of which the identification was not certain.

NOTES

BLUE-HEADED WAGTAIL IN SOMERSET.

AN adult female Blue-headed Wagtail (*Motacilla f. flava*) was shot at Lympsham, Somerset, on June 28th, 1920. On July 3rd and 8th two juveniles were also obtained both showing the brown markings on the breast, and therefore indistinguishable from Yellow Wagtails (*M. f. rayi*) in the same plumage. As no other Yellow Wagtails were observed it is almost certain they belonged to the above-mentioned female and had been bred in this locality, a few miles from Brean Down and the shores of the Bristol Channel. The land is low lying and well watered on north and south by the rivers Axe and Brue. The identification of the adult bird has been confirmed by

STANLEY LEWIS.

SWALLOWS AND SIZE OF BROODS IN 1920.

THE summer of 1920 in North Lancashire and Westmorland was the worst year for Swallows within the memory of the oldest inhabitants. Farms which in normal years harboured six to fifteen or even twenty-five nests, had none of them more than three nests this year, the majority only one, and many none at all; indeed only one farm had three. The scarcity was most marked in the few seen flying around. Apart from this remarkable scarcity, the broods were very large ones, 57.14 per cent. containing full broods, and they all thrive well, as insect food was plentiful.

	Nests visited.	Broods of six or more.	Broods of five.	Average full broods. per cent.	Average brood.
1909	11	0	0	0	3.27
1910	45	0	15	33	3.89
1911	60	3	24	45	4.4
1912	20	0	8	40	3.95
1913	22	0	3	13.6	3.27
1914	None	—	—	—	—
1915	38	5	14	50	4.65
1916	42	0	12	28.5	4.0
1917	70	4	28.	45.7	4.3
1918	51	4	14	35.2	4.19
1919	59	0	23	38.9	4.11
1920	14	1	7	57.14	4.5

H. W. ROBINSON.

BRITISH RECORDS OF THE SPOTTED EAGLE.

WITH reference to the third example of the Spotted Eagle (St. Columb, November 1861) referred to on page 181, Mr. P. D. Williams kindly writes (January 6th, 1921) that the curator of the Truro Museum informs him that this bird is in excellent order, and that the statement that it was destroyed by moth is quite untrue.

Mr. Miller Christy has kindly supplied me with a photograph of the seventh (Elmstead, October 29th, 1891), and Dr. Hartert and I have compared this and the figure of the bird in Lilford's *Coloured Figures of British Birds*, Vol. I., pl. 4, with skins, and are satisfied that it was an example of *A. clanga*. Judging by the figure in Lilford I think this bird was about eighteen months old and not in juvenile plumage, as the figure shows no buffish-white tips to the tail nor white on the upper tail-coverts. The figure of the Sudbourne, Wickham Market, bird (Plate 5), shows these clearly, and is evidently a juvenile. Of the Leigh bird (No. 9 in my paper, p. 181) Lord Lilford writes (p. 4) that it was "nearly as beautiful" as the Sudbourne one. If one may assume that he was referring to the spotting it would seem clear that this was also *A. clanga*.

Mr. Miller Christy also kindly points out that an Essex taken Spotted Eagle has been omitted from our *Hand-List* (1912) and from my article. This bird was exhibited at a meeting of the Essex Field Club on May 23rd, 1908, by Mr. Miller Christy and is recorded in the *Essex Naturalist*, Vol. XV., p. 272. It was a male and was picked up dead at Downham at the end of April 1908. It had been seen in the district for several months previously and appears to have died of shot wounds. This bird appears likely to have been *A. clanga*, but this should be confirmed by examination of the specimen, which, Mr. Christy tells me, may still be at the De Beauvoir Arms, Downham.

H. F. WITHERBY.

BLACK-NECKED GREBE BREEDING IN IRELAND.

FOR many years both Mr. Williams and I had received news of "curious" Grebes which were seen on Irish loughs during the summer months. We always ascribed them to *Podiceps nigricollis*, and felt sure they were nesting, but it was not until 1915 that proof was forthcoming and Mr. Williams was able to announce a definite breeding record. On August 25th of that year he received a young bird of this species which was undoubtedly reared in Ireland (*British Birds*, Vol. IX., p. 125).

Mr. Witherby, who exhibited this specimen at a meeting

of the British Ornithologists' Club on October 13th, 1915, stated that it was obtained in the west of Ireland on a lake about fifty miles from the sea. He particularly remarked that owing to its state of immaturity it could not possibly have reached this lake from the sea so far away, although it might conceivably have flown a very short distance.

The officer who shot this Grebe—unaware of the species—has been away on service, but his father has kindly given me particulars. The lake—a very small one—is situated at his gate and usually dries up in summer, but in 1915 it did not do so. On two little hills in the centre a pair of Swans and several wild ducks brought off young, and it was in shooting the latter that his son obtained this bird. No Grebes have since been noticed at this piece of water, but the whole locality is ideal, being studded with lakes great or small. As only one youngster was killed, it is reasonable to hope that the species is maintaining itself unobserved in that area.

Nothing further was heard of Black-necked Grebes breeding in Ireland until on June 18th, 1918, Mr. Williams received in the flesh a male and female in full summer plumage and three young in down. They were all presented to our National Museum in Dublin by the shooter, who desired no publicity whatsoever—a quite intelligible position when the whole family of a rare species has been wiped out.

I do not know if others were breeding in company with them—this species has a tendency to breed in colonies—although Mr. Williams assumed such to be the case because of the disparity in size and age of the chicks received, and which he therefore considered to belong to different broods. This, however, is unconvincing, particularly if their habits coincide with those of Great Crested Grebes, which allow a considerable time—even four or five days—to elapse between the laying of their eggs.

Owing to the veil drawn over the entire episode it has not been possible to locate the precise spot where the birds were obtained, but it was in the west of Ireland also, south of the first record.

When so many sheets of Irish waters are plentifully frequented by Grebes a sharp look-out should be kept over the country for this species, which is showing such a tendency to extend its summer range in the British Isles. And now that its breeding in Ireland has been definitely established on two occasions, I hope it will be given a chance in future and spared whenever met.

C. J. CARROLL.

BLACK TERN IN LANCASHIRE.

IN addition to my record (*antea*, p. 141) of the occurrence of the Black Tern (*Hydrochelidon n. nigra*) in west Lancashire in May and June 1920, I observed a pair of these birds on Marton Mere (near Blackpool) on the evening of September 28th, 1920.

R. A. H. COOMBS.

SABINE'S GULL IN DEVON.

ON October 4th, 1920, an immature male Sabine's Gull (*Xema sabini*) was shot on the Exe estuary, and presented to the Royal Albert Memorial Museum, Exeter. It is of occasional occurrence on the south coast of Devon, in autumn, and always in immature plumage. There have been less than a dozen actual records, and no previous ones from the Exe. It seems, however, to have occurred considerably more often than this would imply, especially as regards the Exe estuary.

T. P. BACKHOUSE.

FOOD OF THE WATER-RAIL.

A WATER-RAIL ♂ (*Rallus aquaticus*) killed November 23rd, 1920, on the Gowan River, Westmorland, had in its crop remains of the freshwater crayfish, including two claws and some legs. As far as I am aware this crustacean has not been previously recorded as forming part of the food of the Water-Rail. Crayfish are plentiful in the river. The bird was dissected by Miss Marjory Garnett, of Windermere.

J. F. PETERS.

BREEDING OF THE BRAMBLING IN SCOTLAND.—In the *Scottish Naturalist* (1920, pp. 181-182) there is an interesting note on the breeding of the Brambling (*Fringilla montifringilla*) in Sutherland by Catharine Hodgkin and T. E. Hodgkin. On May 18th, 1920, the cock and hen bird were observed, and the nest was begun on the following day. Progress was watched daily, and on May 22nd the hen was seen in the almost completed nest. By May 31st seven eggs had been laid, which were taken on June 3rd, when incubation had begun. The nest was placed in the fork of a Scotch pine at 25 ft. from the ground, in a wood of pine and a few larches. The margin of the nest was much wider than that of the Chaffinch, measuring outside 5 ins., inside 2½ ins. No other Bramblings were seen in the neighbourhood. The parent birds were not shot as they were sufficiently identified by the recorders, but we think it was a pity to take the whole clutch of eggs. It was not necessary for the sake of identification,

and although normally the birds would, of course, build and lay again, the chances against a single pair of Bramblings establishing themselves must be very considerable. Everything possible should have been done to enable them to rear young, which might reasonably be expected to return to breed in the same district.—EDS.

Reference is made (*loc. cit.*) to E. T. Booth's record of a nest with three eggs of this species in Perthshire in 1866 (*Zool.*, 1877, p. 60). In this case the nest was left to be hatched out, but was destroyed a fortnight later, probably by a cat. There can be no doubt that Booth's identification was correct, but though in this instance the locality was probably the true one, in some cases Booth suppressed or altered the names of localities, so that there is no absolute certainty that Glen Lyon was the real scene of this incident. There is, however, another case of breeding, not referred to in the article in the *Scottish Naturalist*. The late Major W. Stirling had a nest and eggs of the Brambling taken by one of his keepers on his own ground at Monar Forest. In this case the keeper, who took the nest, did not secure either parent, and when sent back for this purpose, failed to find the birds. The authentication therefore rests on the evidence of the keeper, together with that afforded by the nest and eggs. Mr. C. D. Borrer, who has inspected them, kindly communicated the facts to me.—F. C. R. JOURDAIN.

THE ECONOMY OF THE WREN.—The literature regarding the nesting and roosting of the Wren (*Troglodytes t. troglodytes*) is rapidly assuming formidable dimensions, and over twenty-five notes on the subject have already appeared in the *Zoologist*, *British Birds*, and the *Irish Naturalist*! Several contributions by Messrs. J. P. Burkitt, E. P. Butterfield and R. F. Ruttledge have recently appeared in the *Irish Nat.*, 1920, pp. 21, 68, 107, 109 and 123. Mr. Burkitt finds that the male apparently does not help to feed the young till they leave the nest, but this is contrary to the experience of most English observers, and also to that of Mr. Ruttledge in co. Mayo. That the hen builds or helps to build the outer structure of the nest, besides adding the inner lining, in some cases at any rate, seems to be established by the evidence of Weir and others, but this may only be the case when there is no available "cock-nest," and it is evident that a series of observations, preferably for various districts, are necessary to settle this and similar points.

REVIEW.

Field Observations on British Birds. By the late F. M. Ogilvie. Edited by H. Balfour. 228 pp. Portrait and illustrations. $10\frac{1}{2}$ ins. \times 7 ins. London, 1920.

WHEN Mr. F. M. Ogilvie died somewhat unexpectedly in 1918, his published notes and observations were strangely few for so careful and conscientious a worker. This is, no doubt, partly accounted for by the fact that for some time past he had been accumulating material for a book on Suffolk ornithology, but apparently the work was not sufficiently advanced to justify its publication, though it is to be hoped that it will not be lost to science altogether. The present book represents the substance of a series of lectures delivered to the Ashmolean Society of Oxford between the years 1902 and 1916, and Mr. H. Balfour has done good service in preparing them for the press.

The subjects of the eight lectures are as follows: The Commoner Waders; Gannets and Cormorants; Common and French Partridges; Common Snipe; Some Characteristic Birds of the Suffolk Moorlands; Leaves from a Shooter's Diary; British Wild Geese; and the Food of our Commoner Falconidæ.

It will be seen at once that a very large share of the book is devoted to ornithology from the point of view of the game preserver and shooting man, but the value of the book lies in the fact that, though himself a keen shot, Mr. Ogilvie could and did treat the problems involved in a perfectly fair and unbiased spirit, and was always ready to admit reliable evidence on either side.

Under these circumstances we need hardly say that the writer's opinions must be treated with respect, for few men have studied these questions more carefully and thoroughly. Thus the question of the food of our Raptorial birds was always of the greatest interest to him, and the actual records of stomach contents are a valuable contribution to our still too scanty literature on the subject.

As the earliest of these lectures was delivered nearly twenty years ago, it is obvious that many of the statements are already out of date, and a certain amount of editorial revision has become necessary. Work of this kind, if done at all, should be thorough, and we think that here the Editor is occasionally at fault. Thus, in 1903, it was quite natural for Mr. Ogilvie to say, while speaking of the Gannet, "There is but one breeding station round the English coast, Lundy

Island. . . . At the present time the colony, if it exists at all, is probably the smallest round the British coasts." The editorial notes contain mention of Mr. J. H. Gurney's well-known work on "The Gannet" (1913), yet a reference to that book would have shown that not a single egg has been laid on Lundy since 1903. Such statements, as that on p. 8, that Mr. Popham's "clutches" of eggs of the Curlew-Sandpiper are still unique also now require modification. We must confess to some doubt as to whether Mr. Ogilvie really wrote (p. 26) that the small fish captured by Puffins were probably the "prey" of the herring and sprat, and think that the word in question was more likely to have been "fry." The definition of the breeding-ground of the Grey Lag-Goose (p. 178) is not altogether accurate.

The list of ornithological papers and notes is also not quite complete. Thus, we notice no reference to a note contributed to the *Field* (April 12th, 1913) on the "Early Appearance of the Common Tern" [near Oxford]. We must not omit to mention the carefully executed coloured figures of the bills of *Anser anser* and *A. albifrons*, which have the great merit of being executed from absolutely freshly killed specimens. The sketches by the Editor and D. Gunn add to the attractiveness of the book, and misprints are happily scarce, though that on p. 91 (Lewis for Lewes) should, perhaps, be mentioned as it might lead to misconception. The book is pre-eminently one for the sportsman naturalist, by one who in his own person combined some of the best qualities of both.

F. C. R. JOURDAIN.

LETTERS.

POSSIBLE MIGRATION OF YELLOW BUNTINGS.

To the Editors of BRITISH BIRDS.

SIRS,—As I made an observation on the night of December 29th, 1920, which might indicate that a migration movement of Yellow Buntings was in progress, I should be much obliged if anyone who noticed any evidence of such a migration would kindly communicate with me. Information from Lighthouses would be particularly welcome.

WOBURN ABBEY, BEDFORDSHIRE.

M. BEDFORD.

ANCIENT RECORD OF A HAWK CARRYING A LETTER.

To the Editors of BRITISH BIRDS.

SIRS,—Making researches into nautical history, I came across the following ornithological observation, which greatly interested and amused me. I fancy it has not previously been noted in ornithological publications.

The *Naval Chronicle* for 1799 (Vol. I., p. 127) contains the following paragraph :—

"The following is a copy of a letter found tied to the neck of a Hawk caught on the 4th September, 1795, by Mr. Malcolm of Kinghorn, in Scotland: It was picked up by him the day it was written, and had come at least 50 leagues, the 'Texel'* being then about 70 leagues distant.

On board the 'Lion,' Sept. 4th, 1795.

I send this from on board the 'Lion' of 64 guns, twenty-five leagues off the Texel, in chase of a frigate and sloop of war. He that gets this letter will put it in the newspaper.

Richard Wilkinson, Midshipman."

The foregoing is interesting as being an early example of marking birds and noting their movements. Had the times of despatch and capture been noted, the speed of flight might have been calculated. The distance from Kinghorn, in the Firth of Forth, opposite Leith, to the Texel is roughly 350 miles, so the Hawk must have flown about 265 miles.

C. SUFFERN.

FAREHAM, HANTS, *November 20th, 1920.*

UNACCEPTABLE RECORD OF LONG-TAILED DUCK BREEDING IN IRELAND.

To the Editors of BRITISH BIRDS.

SIRS,—Amongst a collection of eggs, the property of an anonymous vendor, advertised for sale at Stevens' on November 23rd, 1920, was a clutch of four duck's eggs described in the catalogue as "Long-tailed Duck c/4, with lining of nest; Lough Neagh, Ireland, 3rd of June, 1914; very rare British eggs." I am not in the habit of buying eggs, but I gave instructions to have these purchased for me, as in the interests of Irish ornithology I considered the record should be either proved or otherwise at once.

Much encouraged by the statement in the catalogue that "all eggs offered are guaranteed authentic by the Collector, who will be glad to furnish further notes on request," I tried to trace these eggs from the beginning, with the following result. They belonged to a collector who died some years ago, and passed with other eggs to his brother. The latter sold the collection to the vendor mentioned above, and then destroyed all papers and records relating to it, so he has no idea from whom this set originally came!

I have not had these eggs examined—they are accompanied, by the way, with no down—as even should they belong to this species, we cannot admit a new record for Ireland on the slender evidence of a data ticket alone.

C. J. CARROLL.

FETHARD, CO. TIPPERARY, *Jan. 1921.*

AMERICAN OYSTERCATCHERS FEEDING ON OYSTERS.

To the Editors of BRITISH BIRDS.

SIRS,—On looking over a paper by Mr. Edward Fleisher on the "Birds of South-eastern North Carolina," published in the *Auk* for October 1920, I came across a passage referring to the American Oystercatcher (*Hæmatopus palliatus*) feeding upon the oyster. Catesby appears to have been the first author to suspect the Oystercatcher

* *Sic.* ? mistake for "Lion."

of opening up oysters, and his observations were also made in the State of Carolina. Prof. Newton, however, regarded Catesby's statement as untrustworthy; and later writers, with some exceptions, have also doubted or denied the possibility of the Oystercatcher feeding upon oysters. That the British species does not, at the present time, open oysters, will, I suppose, be generally admitted. The activities of *H. palliatus*, in this connection, are, therefore, a matter of some interest. In response to a request for further information, Mr. Fleisher very kindly sent me details of his observations and gave his permission to have them published on this side. The following is a transcript of the relevant part of his letter:

"On Smith's Island at the mouth of the Cape Fear River in south-eastern North Carolina there are extensive mud-flats exposed at low tide. These are dotted with small and large clumps of oysters (*Ostrea virginica*), consisting of old and young and dead oysters in a solid mass. As I remember most of the oysters point upward. In almost every clump that I noticed particularly, there were some large old oysters and some young ones, the latter generally on the periphery of the clumps.

"The Oystercatchers were common where the oysters were, and in almost every clump the small molluscs were open and empty. The first one I looked at had a trace of flesh clinging to the shell. Another in the same clump was clear of flesh. About most of the clumps, where the nature of the ground permitted, there was a lace-work of tracks, which, I thought, included those of the Oystercatcher. I paid little further attention to the oysters and did not actually see any birds operating on them. The birds were rather shy. I might add that, while I took no measurements, I am sure that none of the open shells, that I saw, was as much as three inches long. . . . I felt convinced that the birds did open and eat the small oysters. In my paper I said ' . . . the small clumps of oysters on the mud-flats showed evidence of their work. In most cases, the smaller molluscs on the outside of the clumps were the ones that were opened and the larger ones left alone.' I realize now that the evidence was circumstantial and may not be considered conclusive. I do not remember whether any of the valves were fractured. . . . I am still of the opinion that *H. palliatus* fed upon the oysters at Smith's Island."

Although, as Mr. Fleisher states, his evidence is only circumstantial, I do not think there can be any doubt that *H. palliatus* can and does feed upon the smaller individuals of the American oyster, and that Catesby was perfectly correct in his surmise. While *H. palliatus* and *ostralegus* appear to be much alike in size and appearance and in strength of bill, there are considerable differences between *Ostrea virginica* and *O. edulis*. Both are thick-shelled. But the former grows more in length than in breadth as compared with the latter, being four or five times as long as broad, while *O. edulis* is not much longer than broad. This difference should give the adductor muscle which closes the valves more purchase in *O. virginica* than in *O. edulis*, the more so as the muscle is inserted distally to the centre of the valve. Hence it would appear that *H. palliatus* has a bigger job in opening the shells of *O. virginica* than it would have if *O. edulis* were its food-supply. In view of Mr. Fleisher's observations, there is now no *a priori* reason why *H. ostralegus* should not be able to open oysters; and, in my belief, it would readily do so if intertidal oysters were available on the shores of this country.

J. M. DEWAR.

EDINBURGH, Dec. 1920.

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A THIRD SEASON'S OBSERVATIONS ON A CUCKOO.

BY

EDGAR CHANCE, M.B.O.U.

It may perhaps be recalled by some of the readers of *British Birds*, and more especially by those who are particularly interested in the ways of *Cuculus c. canorus*, that I expressed a wish, in the number for August last (*antea*, p. 70), to submit a detailed account of my last season's observations on a Cuckoo which laid the hitherto unheard of number of twenty-one eggs.

In the endeavour to prepare such an account I found that my notes, taken over a period in May and June, are of so extensive a character as to be, in their entirety; beyond the scope of a magazine article. I must therefore now content myself with a *résumé* of some of the more material facts, leaving the full story to be embodied in a volume which I hope to have the pleasure of publishing at an early date.

Vols. XII. (pp. 182-4) and XIII. (pp. 90-5) of *British Birds* contain my observations on this same Cuckoo for the seasons of 1918 and 1919 in which I took nine and sixteen of her eggs respectively. The scene of operations is an exceptionally favourable one for keeping in constant touch with a Cuckoo in occupation of it, for it is a small, and comparatively open, gorse-clad common about a mile in circumference on the edge of a forest in the Midland Counties, and with a little assistance one can keep practically the whole area in view. This Cuckoo had in 1919 been proved to be faithful to the Meadow-Pipit (*Anthus pratensis*) as a fosterer, and beyond those on the common there are no other Meadow-Pipits breeding within three miles. In support of the now generally accepted fact that she is the same Cuckoo returning season after season, she lays an egg of such a distinctive type that out of many hundreds of other Cuckoos' eggs examined I have not seen one that could be confused with it. As in the previous season, 1919, I found sixteen of her eggs, besides two young, it had been suggested that two Cuckoos, mother and daughter, were laying on the same common eggs exactly similar in type. That this was not so is conclusively shown by the fact that experience gained of the bird in 1920 taught me to foretell her movements with such accuracy that we learnt

how to know when and where she would deposit her eggs and, on many occasions, actually watched her do so. This fore-knowledge was all the more gratifying since it enabled me to invite friends to come and see the whole performance with the confidence that they would not meet with disappointment.

One result of the 1919 observations was a strengthening of my previously expressed opinion that the number of eggs laid by a Cuckoo in a season depended chiefly upon a regular supply of suitable nests of her favourite or natural fosterers, the latter being individuals of that species by which she herself was reared ; in which circumstances she had appeared willing to lay for a long period an average of an egg every alternate day. It may be well to interpolate here that those field-ologists who have given the most attention to the Cuckoo agree that at least many females have their spheres of influence, or territories, to which they return annually. This can be proved beyond dispute, and this paper is additional evidence of the correctness of that belief.

In anticipation of the return of the Cuckoo to this common last year, I paid visits to it early in May, to study the Meadow-Pipit situation. The result of close examination ultimately showed that there were nine pairs in occupation of the ground, six of them having eggs before the appearance of the Cuckoo. Now it may not be generally realized that if their eggs be taken, Pipits may be relied upon to build and begin to lay again usually within about eight days. This wonderful provision for the maintenance of the balance of Nature is practically, if not quite, universal amongst birds, for when a nest of eggs from any cause whatever be destroyed, the pair forthwith sets to work to rebuild and lay again. I desire to lay stress upon this scientific fact, which no one can deny, because there is no need for stringent legislation to protect bird-life from the alleged harm done by the egg collector, except in a few cases where it is most essential.

To provide for the Cuckoo the most favourable circumstances it was obviously necessary so to order the laying of these nine pairs of Meadow-Pipits that there should always be a nest ready for her. At the first impression there may not appear to be much difficulty about this manipulation, but second thoughts will show that it needed very close and thorough observation, much careful note-taking and adjustment, in order to avoid any unfortunate lapse in the nesting sequence.

It would take up too much space here to give in detail the history of each pair of Meadow-Pipits, but it may be suffi-

ciently indicated in the following brief summary of the doings of each pair :

NO. 1 PAIR.—Had five nests, the Cuckoo selecting the last four for her 2nd, 6th, 12th and 18th eggs.

NO. 2 PAIR.—Had only two nests, the first before the Cuckoo arrived, the second when she had others from which to choose. This was the only pair not victimized by the Cuckoo and but for their early disappearance would doubtless not have escaped her attentions.

NO. 3 PAIR.—Also had only two nests, the first before the Cuckoo appeared on the scene. The second received her 7th egg. After that event, the female Pipit disappeared, probably being taken by a Kestrel (*Falco tinnunculus*) which was subsequently found to have young not far away.

NO. 4 PAIR.—Had three nests before the female also disappeared early in June. The second and third nests received respectively the 1st and 8th eggs of the Cuckoo.

NO. 5 PAIR.—Had five nests. The Cuckoo deposited her 5th, 13th, 17th and 21st eggs in the last four.

NO. 6 PAIR.—Also had five nests. The first four secured the 3rd, 10th, 14th and 20th eggs of the Cuckoo, and on the fifth attempt the Meadow-Pipits hatched and reared their own young after the departure of the Cuckoo.

NO. 7 PAIR.—Had only two nests, the second being used by the Cuckoo for her 9th egg. This pair then vanished, presumably falling victims to the Kestrel.

NO. 8 PAIR.—Built four nests, and the Cuckoo selected the second and third for her 16th and 19th eggs, and at the fourth attempt the Meadow-Pipits safely reared their own young after the Cuckoo had departed.

NO. 9 PAIR.—Had three nests, the last two receiving the 4th and 11th eggs of the Cuckoo. This pair then apparently met with disaster at the claws of the Kestrel.

Altogether these nine pairs of Pipits built thirty nests. Of these, I removed the eggs from six before the Cuckoo arrived, and two had broods after she had left. Each pair, of course, occupied its own territory. Once the respective "spheres of influence" were definitely ascertained, it became possible to keep in touch with the doings of all the pairs and, when necessary, to re-start nests against the future needs of the Cuckoo. By "re-start" I mean removing the eggs from the nest, thus causing the birds to build and lay again.

The twenty-one eggs of the Cuckoo were laid on the following dates: May 13th, 15th, 17th, 19th, 21st, 23rd, 25th, 27th, 29th, 31st, June 2nd, 4th, 6th, 8th, 10th, 12th, 16th, 18th, 20th, 22nd and 27th. The evidence for the first four of these having been laid on the dates given is circumstantial, but I am convinced that they are the correct ones. It is advisable, so far as the exigencies of space permit, to deal with the deposition of each of these eggs for there are points

to be noted about many of them which support the conclusions advanced at the end of this paper.

1ST EGG.

This was actually found at 8 p.m. (Summer Time, *i.e.* 7 p.m. Greenwich Time) on May 20th, and although the third of the series in order of discovery was by all available evidence, such as stage of incubation, etc., laid on May 13th. It was in the second nest of No. 4 pair with four of the fosterer's eggs.

2ND EGG.

Found at 8 p.m. on May 15th in the second nest of No. 1 pair with two of the fosterer's eggs. This was the first egg of the series to be discovered, but I am reasonably certain that it was the second actually to be laid, and laid on this day.

3RD EGG.

Found at 11 a.m. on May 21st in the first nest, with three eggs of No. 6 pair, but I am fully satisfied that it was laid on May 17th.

4TH EGG.

Found at 7 p.m. on May 19th, in the second nest, with one egg of No. 9 pair. This was the second egg of the series actually found, but I am convinced that it was the fourth laid, and that on this day.

5TH EGG.

Found on May 22nd, at 9 a.m., in the second nest, with three eggs of No. 5 pair. On the 21st at noon this nest held three eggs of the Pipit. Subsequent knowledge of the habits of this Cuckoo shows that this egg was laid on the afternoon of the 21st and exchanged for a Pipit's egg, the fosterer laying a fourth egg before 9 a.m., as usual.

6TH EGG.

Found on May 24th at 8 a.m. in the third nest, with one egg of No. 1 pair. On the 23rd at 3 p.m. this nest contained one egg of the fosterer and the Cuckoo's egg must have been deposited later the same afternoon.

7TH EGG.

Found on May 26th at 4 a.m. in the second nest, with one egg of No. 3 pair. The eggs were all wet with dew, showing that the Cuckoo had laid the previous afternoon, we having seen the nest at mid-day, when it held two eggs of the fosterer. It also shows that the Pipit did not remain at the nest during the night. By 6 a.m. the Pipit had laid a third egg.

8TH EGG.

Found on May 27th at 5.45 p.m. alone in the third nest of No. 4 pair. At 8 a.m. the nest had contained one Pipit's egg.

9TH EGG.

Found on May 31st at 4.30 p.m. in the second nest, with two eggs of No. 7 pair. This egg had undoubtedly been deposited two days previously in exchange for the then single egg of the Pipit.

10TH EGG.

Found on May 31st at 3.55 p.m. in the second nest, with two eggs of No. 6 pair. At 10 a.m. the nest contained three eggs of the Pipit. The Cuckoo had been seen to fly down to this nest on the 29th.

11TH EGG.

Although we had so far not seen the Cuckoo actually deposit her egg we had narrowly missed doing so on more than one occasion. By this date, June 2nd, the accumulated experiences gained over the period in which the first ten eggs had been laid—a period, so to speak, of pioneer work in which I had been afforded the invaluable assistance of Q. R. Owen, of Knighton, my college friend, T. W. Helme, of Lancaster, Mrs. Newton, of Edgbaston, and the two Simmonds, father and son, who live on the confines of the common—pointed, in a manner convincing to me, to the extreme likelihood of the Cuckoo to-day depositing her egg in the third nest of No. 9 pair whence she had been seen to fly on May 30th, when it contained one egg of the Pipit. Accordingly I invited a friend, Mrs. Brown, to come and witness the expected performance. There were at this date two other possible nests available but I had every confidence in the correctness of my forecast, so at 10.30 a.m. we took up a position about 150 yards from the nest. Nothing much happened until at about 1 o'clock there were at least three Cuckoos playing about in an orchard in the middle of the common. At 2 p.m. what proved to be the female Cuckoo left the others and flew to an oak tree in the forest which commanded a perfect view of the nest. She remained motionless until 2.35 when, with an unusual and gliding action, she flew, accompanied by the Pipits down to the site of the nest and back again. In the next ten minutes she repeated the performance four times. On the last occasion she seemed momentarily to settle beside the nest before flying right away across the forest. Then I looked at the nest and found the four eggs untouched.

Soon after 3.15 the Cuckoo came back into the same oak

tree and occupied the same perch. At 4.30 she once again floated down from the tree and settled for a few seconds beside the nest. The suddenness of the proceeding was such that I really had no time either to focus my field-glasses or take in hand my watch. For the few moments that the Cuckoo was at the nest the two Pipits could clearly be seen fluttering round her, but only one chased her as she flew off. On going up to the spot I was overjoyed to find one of the Pipit's eggs missing and that of the Cuckoo, still warm, in its place.

Thus my desire was at length fulfilled, but in a manner so unexpected that much was left to be discovered on subsequent occasions. It was so far certain that in all too brief a time the Cuckoo had laid her egg beside the nest, inserted it with her bill, and had removed without leaving a trace one of the fosterer's eggs.

12TH EGG.

June 4th.—As it could now be seen that the Cuckoo was laying at intervals approximating forty-eight hours, nothing was expected of her yesterday, but to-day it was rather anticipated she would place her egg in the nest of No. 5 pair of Meadow-Pipits, which had just completed its clutch of five eggs. There was no other nest known to be available, and although it was surmised that No. 1 pair might have one ready, yet we had not been able hitherto to find it. Consequently at 1 p.m. I took up a position on the breeding territory of No. 1 pair whilst the two Simmonds were stationed at other points giving a general view of the common, in particular the nest of No. 5 pair. At 2 p.m. I walked over to the Simmonds and did so again at 3 p.m., nothing having been seen of the Cuckoo during the two hours. About 3.15 I returned by a circuitous route to my station on the breeding territory of No. 1 pair, and saw a Cuckoo, chased by a Pipit, rise from the ground not twenty yards in front of me. I searched the place with no result. Having watched for, but seen no more of, the Cuckoo, we adjourned to tea. Later in the evening another thorough search was undertaken around the spot where I had seen the Cuckoo leave the ground, the behaviour of the No. 1 male Meadow-Pipit now undoubtedly indicating a sitting mate. Eventually the Pipit was flushed from an exceptionally skilfully concealed nest down a long hole overhung by gorse. It contained two eggs of the fosterer and the twelfth of the Cuckoo. This was the unfortunately hitherto undiscovered fourth nest of No. 1 pair, which had been re-started on May 27th. The

Cuckoo had visited it during the ten minutes or so that I was away from that part of the common and had just deposited her 12th egg when I saw her at 3.15.

13TH EGG.

June 6th.—To-day I was accompanied by my friend, C. F. Bristol, of Edgbaston, who was spending the week-end with me, and the boy Simmonds. Owing to the assumed depredations of the Kestrel the only Meadow-Pipit's nest known of was the third of No. 5 pair, which contained five eggs on the 3rd, one of which I had taken away. On the 5th the Pipit was sitting on the four eggs. Both at 10 a.m. and 1 p.m. to-day there were only three eggs in the nest, cold, and the Pipit not sitting. At 3.42 the Cuckoo flew down to the nest and forward to another favourite tree. Three minutes later she flew back to the nest, which lay between the two parties of observers, and remained beside it for ten minutes, depositing her 13th egg, and removing one of the Pipit's eggs. Meantime the fosterer hovered overhead time and again. Long before to-day I had had unmistakable evidence that the Cuckoo, by watching the owners, finds and selects a nest days before she makes use of it. The present observation also shows that she will still deposit her egg in a selected nest, whether or no it be deserted at the time she is due to lay. I am of the opinion that the Pipit in this case herself removed one of her eggs and then deserted her nest in resentment at the over-attention of the Cuckoo. This opinion will be amplified and supported by evidence given when the 21st egg of the Cuckoo is dealt with.

14TH EGG.

June 8th.—The nest forecasted to-day for the reception of the Cuckoo's egg was the third of No. 6 pair. Accompanied by my secretary, Miss Young, I arrived on the common at 1 p.m. For some time before 3 p.m. onwards the Cuckoo showed evident intentions of utilizing the nest which I had expected, but was several times disturbed by passers-by. Between 4.30 and 4.45 she made four floating glides down to the nest, evincing the merest pretence of alighting on the first of these occasions. At the fourth she stayed by the nest for a little over a minute, in which time she laid and deposited her 14th egg and removed one of those of the Pipit. As she flew away I distinctly saw the egg in her mandibles, being able to see through the open beak behind the egg.

15TH EGG.

June 10th.—For the deposition of to-day's egg there was no Meadow-Pipit's nest available owing, beyond almost all

manner of doubt, to the operations of the Kestrel with a brood in the vicinity. Having foreseen the difficulty of finding out what the Cuckoo would do under these circumstances, I had sent an urgent message to P. B. Smyth, of Wanstead, London, asking him to come down and help. He, the two Simmonds, and I took up positions at 1.30, and between us we had a fairly comprehensive view of the whole common. After various manœuvres during the course of the afternoon the Cuckoo soon after 4.15 settled in a cherry tree facing a nest of a Tree-Pipit (*Anthus trivialis*) which we had previously found, and which contained five fresh eggs earlier in the day. At 6.30 the Cuckoo was heard "bubbling" as she usually did immediately after the deposition of an egg, to which call the male or males invariably responded, and was then seen to fly away into the forest. Disappointed at what seemed like a blank day, we yet thought it might be just as well to look into the Tree-Pipit's nest. To our intense surprise and relief it now contained four eggs and the 15th of the Cuckoo. It transpired that the Cuckoo must have gone to the nest between 6 and 6.30, eluding the observation of that member of the party who had been deputed to watch the tree in which she had been last seen to settle.

16TH EGG.

June 12th.—On this day the watchers were O. R. Owen, P. B. Smyth, the two Simmonds and myself. We were without definite knowledge of any Meadow-Pipit's nest and so, distributing ourselves about the common, relied upon the superior information of the Cuckoo. I might add that there were nests of Sky-Lark (*Alauda arvensis*) and Tree-Pipit in suitable condition.

Before lunch, the Cuckoo settled in a tree commanding a view of No. 1 pair of Meadow-Pipits, the nest of which she was probably locating as she was seen to fly to it three days later and made use of it three days later still.

At 2.10 she settled down in the top boughs of a tall pear tree. There she sat so silently and still that, experience having taught us that this motionless and at the same time alert attitude is the prelude to laying, we all from different angles concentrated our attention upon her. She remained without movement for nearly two and a half hours. Then, just after 4.30, she glided down to a point about 40 yards away, and immediately returned without alighting. Within five minutes of her original flight she once again floated down to the same spot and settling there for not longer than thirty

seconds laid and deposited her egg in the second nest of No. 8 pair of Meadow-Pipits. We had not known of this nest until the Cuckoo had shown it to us, and on going up to it found her 16th egg, plus one of the fosterer's. On her flights to the nest she had been accompanied by her intended dupes.

17TH EGG.

This egg marked a break in the Cuckoo's regular laying at forty-eight hour intervals, which in the light of my theory (to be thoroughly explained in my book) as to the circumstances necessary for a Cuckoo to lay a large series in unbroken sequence may be regarded as at least highly probable even if not actually anticipated. We had hoped to see her lay this egg on the afternoon of the 14th. That she was on the common at 2.30 and at 3.10 we had had evidence. At 4 p.m. she flew across just prior to a terrific thunderstorm which lasted until 5.30. Nothing further being seen of her, we retired at 6.30. On the next and subsequent days it can be well imagined that the closest possible search was made for the egg which, according to schedule, should have been laid on the afternoon of the 14th. There was a nest ready for her on the 14th, and she had been seen to watch these fosterers on both the 12th and 13th. Having now considered the matter from every point of view, I have definitely concluded that she in fact did not lay between the 12th and 16th, and shall give my reasons at length when the full record of this Cuckoo is published.

June 16th.—To-day the Cuckoo was seen from 2.20 to 3.40 to sit motionless in a tree as though contemplating laying. She then floated to the ground and showed us the nest of No. 6 pair of Meadow-Pipits, containing one egg. Immediately she glided onwards, chased by the Pipits, until she was lost to view amidst the trees. We saw no more of her before we adjourned for tea at 4.30. Returning at 5.30—it had been raining heavily in the meanwhile—a Cuckoo flew across, bubbling, accompanied by a male. I went to look at the nest of No. 1 pair, thinking that she might have laid there in my absence, but this she had not done. Whilst standing thereabouts at 5.45 I caught sight of a Cuckoo flying up from the spot where the fourth nest of No. 5 pair had been found with one egg a few hours previously, and putting up my glasses I believed I detected an egg in her beak. On going over there I found the 17th egg of the Cuckoo alone in the nest.

This being the day and time due for what would have been the 18th egg, according to the rate of laying of the first sixteen

eggs, it can be well understood that the closeness of the search for the presumed missing egg was redoubled in intensity.

18TH EGG.

June 18th.—The fifth nest of No. 1 pair was to-day indicated for the reception of the Cuckoo's egg, but there was a seemingly equal probability of her making use of a nest of No. 6 pair. She began the afternoon by watching the latter pair. After more systematic searching for the supposed missing egg I went at 3 p.m. over to the nest of No. 1 pair to see if there were any signs of the presence of the Cuckoo near by. I did not see the Cuckoo, but flushed the Pipit from her five eggs. After walking away for some 250 yards I looked back and saw the Cuckoo and the Pipit circling round the site of the nest. Through the glasses I saw her circle three times and then alight. It being full early I hardly expected her then to lay, and so watched until 3.20. Seeing nothing of the Cuckoo, I thought I would vary the proceedings by looking at the nest and to my gratification flushed the Pipit from four of her own eggs and the 18th of the Cuckoo. The time of deposition—3.5—was the earliest by a few minutes hitherto noted.

19TH EGG.

June 20th.—To-day I fully expected the Cuckoo to place her egg in the fourth nest of No. 6 pair, which held a clutch of five completed this morning, and was the only Meadow-Pipit's nest known to be available. It was a miserable day of pouring rain. At 11.30 the Cuckoo settled in an oak tree and was thought to be merely watching No. 8 pair, which I had noticed with building material yesterday. But it subsequently appeared that she was in reality preparing to lay and deposit her egg in that nest. Very unfortunately, I did not look for the nest this morning, not expecting it to be ready, else I should have seen that it already held one egg and consequently should have been more on the *qui vive*. At 1 p.m. we heard the familiar bubbling call of the Cuckoo and watched her to a tall pear tree. Before 1.40 I noticed that the male Pipit of No. 6 pair, which seemed to expect her visit as much as I did, flew to the Cuckoo in the tree and back to the neighbourhood of the nest no less than twelve times in forty minutes. The whole attitude of this particular pair throughout the season appeared to be as though they regarded the Cuckoo's attentions in the light, so to say, of a royal favour.

Twice was the Cuckoo disturbed before 3.45 at which time

she suddenly gave her bubbling call and flew off into the forest. Now, although we waited until 6 p.m., she was seen no more that day. On the 22nd, we found the fourth nest of No. 8 pair, with two of its rightful eggs and the 19th egg of the Cuckoo which had been certainly laid just before one o'clock on the 20th.

20TH EGG.

June 22nd.—To-day it seemed reasonable to expect that the Cuckoo would deposit her egg in the fourth nest of No. 6 pair, although incubation had begun on the 20th, and despite the fact that until 11 o'clock this morning we did not discover her 19th egg. After various convincing movements during the morning, she at length took up a position about 1.30 in a tree overlooking the expected nest. At 2.5 she floated down to the nest, the owners of it flying up to meet her. She stayed on the ground beside it for thirty-one minutes, the Pipits fluttering round her from time to time. On going up to the nest I found four eggs of the Pipit and the 20th egg of the Cuckoo. The latter was quite warm, whilst the former were stone cold. It is worthy of particular note that on the two occasions when the Cuckoo was observed to make a long stay at the nest-side the fosterer had, in each case, already begun to incubate her eggs, and these were the only occasions upon which the Cuckoo deposited her egg with eggs already under incubation.

21ST EGG.

June 24th.—To-day the Cuckoo showed us the 5th nest of No. 5 pair, which contained one egg.

June 25th.—This nest held, as it should have done, two eggs.

June 26th.—This morning there were still only two eggs. At. 2.45 the Cuckoo again flew down to the nest and left the eggs undisturbed. At 6 p.m. I again visited the nest and was surprised to see only one egg.

It will be recollected that, when the 13th egg of the Cuckoo was being dealt with, I said that I should give further evidence in support of my opinion that a fosterer may occasionally remove her own eggs. If the Pipit in this instance did not take away her own egg, what happened to it? Certainly the Cuckoo did not remove it, for she was not seen on the common during the time when the egg disappeared.

The inference that can be drawn is that too much attention by a Cuckoo will at least on some occasions so harass a fosterer that she will show her resentment by removing an egg, or eggs, of her own, and then desert. I have known Red-backed

Shrikes to destroy their eggs after I had examined their nest, and other evidence of a similar nature could be adduced. It will perhaps be asked why, if granted that a fosterer will herself take away an egg, she should not remove them all. The seeming solution is that having learnt by experience that the attention of the Cuckoo eventually means the loss of her eggs, the fosterer, annoyed at the preference shown her, expresses it by removing one of her eggs, perhaps intending to take them all away. But the action of removing the first one appeases her resentment, and she ceases to trouble about the others. All practical ornithologists are aware of the immense variety of temperament displayed by individuals of the same species, and it should be noted that both the cases of presumed egg-removal by the fosterer remarked upon in this paper occurred with No. 5 pair, and in no other case was any egg removed except by the Cuckoo, and then only at the time of deposition.

On the morning of the 27th it was considered certain that the Cuckoo had not laid again since the 22nd. she and the common having been very closely watched during this period. There was, however, still hope that she would place another egg in the deserted nest of No. 5 pair, seeing that she had displayed so much interest in it, and this being the only available Meadow-Pipit's nest on the common.

I placed in this nest four fresh eggs of another Meadow-Pipit brought from some miles away. The day's observations yielded nothing very definite and the setting in of a heavy downpour induced us to leave the common at tea-time.

On the 28th at 1 p.m. I went straight to the deserted nest of No. 5 pair, prepared to watch it for the rest of the day, and to my gratification found the 21st egg of the Cuckoo with three of the substituted Meadow-Pipit's eggs. All the eggs were wet. As there had been no rain this morning it was obvious that the Cuckoo must have laid soon after we left the common yesterday, and removed one of the substituted eggs.

After this date no more Cuckoos were either seen or heard about the common, and so two pairs of Meadow-Pipits duly hatched and reared their broods.

I shall be happy to show this unique series of twenty-one eggs in one season from one Cuckoo to any ornithologist interested, together with the twenty-five taken from the same Cuckoo in the two previous years. It is likely to stand as a record for a considerable time to come, for it will be difficult again to meet with a combination of circumstances so

favourable to the production and discovery of such a lengthy series.

When the detailed information gathered during the daily observations is published as a whole it will, I believe, throw further light upon many points in connection with the Cuckoo which have not been touched upon in this paper. It will also, of course, amplify and analyse the incidents which have now been, but briefly referred to.

For the season now close upon us we are hoping that this Cuckoo will come back to the common to be observed for the fourth time, but this of course depends upon how she may have fared in her winter quarters and on her long journeys to and fro. Should she return, and also the Meadow-Pipits in sufficient number, we have already made arrangements with the object of endeavouring to obtain a series of photographs of the bird in her most interesting moments; and we are not without hope of securing some convincing cinematograph records of her operations. Our knowledge of the ways of this Cuckoo, together with the nature of the ground, should materially help towards the successful issue of our efforts in this direction.

In the meanwhile I should be very pleased to hear (at 9, Hay Hill, London, W.1.), from anyone who might have a suggestion to offer in regard to the making of some particular observation. I mention this with the idea that we may perhaps have the opportunity to be helpful to those who may be pursuing a special line of inquiry and may possibly, in the coming season, not succeed in meeting with a Cuckoo under such favourable conditions as we are likely to do.

Some of the conclusions to be drawn from the observations made are :—

(a) Under exceptionally favourable conditions a Cuckoo can and will lay up to twenty-one eggs in one season, and will deposit nearly all of them at intervals approximating to forty-eight hours. This is not to say or even imply that she lays a large number of eggs under normal circumstances.

(b) As this Cuckoo confined her operations to one territory, it is a fair assumption that this is the general action of Cuckoos. As to this there is, of course, a great volume of other evidence.

(c) Many Cuckoos show a strong tendency to be parasitic upon one species, probably that by which she herself was reared, her natural fosterer. With only one exception, and that a very closely allied species in the

Tree-Pipit, did this Cuckoo in 1919 and 1920 fail to utilize Meadow-Pipits.

(d) The Cuckoo finds a nest by watching the owners of it at the stage of, or in the process of building.

After the fosterer has begun to lay, the Cuckoo often makes a preliminary visit to the nest, and in such circumstances it was invariably found that she made use of the nest a few days afterwards.

(e) The sight of her natural fosterers preparing their own nests, in all probability, has a stimulating effect upon the Cuckoo's natural desire to reproduce her species.

(f) Although on many occasions this Cuckoo was seen to watch fosterers in the state or in the act of nest-building, she was never seen to fly down to the nest until it already possessed at least one egg of the fosterer.

(g) *After* she had once selected a fosterer and flown to its nest, she placed her egg therein even if it were deserted.

(h) Preparatory to laying, the Cuckoo takes up a position commanding a view of the nest of her intended victim and sits usually from half an hour to two and a half hours, mostly motionless and with eyes concentrated upon her fosterers and/or their nesting site. If disturbed she will readily return to the same perch.

(i) When ready to lay her egg the Cuckoo launches from her perch and with laden flight glides down beside the nest, with outstretched wings which she slowly flaps, if necessary, to reach the nest-side. This is probably true in the case of all ground-building fosterers, but what occurs in other circumstances has yet to be established.

(j) Except on the two occasions when she deposited her egg in a nest of eggs already under incubation, this Cuckoo only remained beside the nest from thirty to ninety seconds, for the purpose of laying her egg and inserting it in the fosterer's nest.

(k) The fosterer's egg removed by this Cuckoo from the nest after depositing her own was, according to the length of visit beside the nest, either swallowed at the nest-side or carried in her beak to a conveniently adjacent tree where the egg may or may not have been swallowed.

(l) After this Cuckoo had laid and deposited her egg and disposed of that of the fosterer, she resumed her normal lively condition, usually uttering her cheerful

bubbling note much in the same way as a fowl often cackles after laying.

(*m*) The Cuckoo will deposit her egg in a nest any day up till the time the fosterer has begun to incubate her own eggs but probably seldom, if ever, before the fosterer has laid her first egg. On rare occasions the Cuckoo will make use of a nest containing eggs in the early stages of incubation.

(*n*) This Cuckoo does not place more than one of her eggs in any one nest.

(*o*) The Cuckoo removes probably in the majority of cases one egg in exchange for her own. This Cuckoo removed one and only one at every deposition.

(*p*) When an egg or eggs disappear from a nest it must not be assumed that they have been removed by a Cuckoo.

(*q*) This Cuckoo laid in the afternoon, not—as so many birds do—in the early morning. This may or may not be true of most Cuckoos.

(*r*) Except of course for coition the female Cuckoo acts entirely upon her own responsibility in all matters relating to egg-deposition, and for these purposes separates herself from her accompanying male or males.

(*s*) The behaviour of her dupes varies according to their individual temperament, from apparent welcome through more or less unconcern to active annoyance and resentment.

NOTES

MIGRATION IN JANUARY.

I do not know whether other observers would agree that true migration appears to cease in this country about the beginning of December ; apart from local movements due to shortage of food, or larger movements obviously connected with a sudden spell of cold weather, I had never, until this winter, observed anything like real southward migration after about December 10th.

I was at Dungeness from December 30th, 1920 to January 3rd, 1921. December 31st was wet and stormy ; January 1st less windy, but very wet after 10 a.m. ; January 2nd wet and stormy ; and January 3rd sunny with hardly any wind. The temperature was well above the average all the time, and January 3rd would have done credit to the south of Italy. I believe similar mild conditions prevailed generally over our islands and the neighbouring parts of Europe. The shingle bushes, in which there are often a few Pipits and Linnets and other small birds, as well as Larks, in mid-winter, were exceptionally empty. I saw nothing but Larks in them.

At dawn on January 1st I rather thought I heard a Brambling's note, but as I did not hear it again I inferred that I had imagined it. Before sunrise on January 3rd a Meadow-Pipit (*Anthus pratensis*) came flying south along the shingle towards the point, and during the following hour or more (8—9 a.m.) small parties of Linnets (*Carduelis c. cannabina*) and a few Greenfinches (*Chloris c. chloris*) were frequently passing, flying in directions between south and west. A few of these seemed to have come in from the east, but they may only have been flying parallel to the coast a little way out, and come in at the point. Most of the morning I was on Littlestone sands, where I saw two Sky-Larks (*Alauda arvensis*) flying in from the east, but I could not be sure that they had not been feeding nearer the sea.

About 11.15 I saw a party of about fifteen Linnets flying steadily south over Littlestone sandhills. On my return to the point I specially crossed the ground on which Finches commonly settle, but I found none that had alighted. About 1.15 I heard a Goldfinch (*C. carduelis*) flying (apparently) west or south-west ; and a moment later two or three Linnets going in the same direction. Apparently this was about the

end of the day's migration. In fact, the whole thing was just like a rather poor migration day in October or early November.

The birds I saw, as with nearly all the Finches I have seen migrating at Dungeness in autumn, were flying at an altitude that I estimated as about 100 feet, or rather less.

H. G. ALEXANDER.

TAWNY OWL NESTING IN A ROOKERY.

ON March 31st, 1919, while examining the nests in a large rookery at Cricket Hill, near Yateley, Hampshire, I found that a pair of Tawny Owls (*Strix aluco*) had taken possession of one of the nests in a high Scotch fir. There were four eggs in it—undoubtedly those of the Tawny Owl. Some of the Rooks occupied nests in the same tree, and had begun to lay. Unfortunately I was not able to revisit the rookery, and so do not know the ultimate fate of the Owls.

H. B. COTT.

[It is not uncommon for this species to breed in Rooks' nests, and the Rooks take little notice of them; cf. *Field*, April 23rd, 1904; similar instances have been met with by Mr. R. H. Read, the writer, and others.—F.C.R.J.]

SPOONBILL IN GLOUCESTER.

A FINE adult male Spoonbill (*Platalea l. leucorodia*) was shot on the Severn a few miles south of Gloucester on February 17th, 1920. It was purchased by me in the flesh, and is now in the Bristol Museum.

F. H. L. WHISH.

SQUACCO HERON IN DEVON.

ON May 17th, 1920, an immature Squacco Heron (*Ardeola r. ralloides*) was shot on the Exe estuary. Of the five definite records of this accidental visitor to the county none are from the Exe estuary.

T. P. BACKHOUSE.

BITTERN IN CO. ANTRIM.

I WAS most fortunate in securing a beautiful male specimen of the Common Bittern (*Botaurus stellaris*) at Rangecroft's poultry shop. It was shot by a local gunner at Mosley, on January 13th, 1921, and according to Ussher and Warren, there is no previous record for the county, although twenty-one are given for co. Down.

W. H. WORKMAN.

FLAMINGOS ON MIGRATION IN MEDITERRANEAN.

WHILE returning from India on the S.S. "Patricia" on October 5th, 1920, we saw at about 10 a.m. a flock of some

twenty-five Flamingos (*Phænicopterus r. antiquorum*), flying low over the water in file. They passed about 400 yards astern, going due south, presumably on their way from Sardinia to the north African coast. The ship's position at midday was lat. $37^{\circ} 40'$ N.: long. $7^{\circ} 52'$ E. Other birds noted on the same day include a Mistle-Thrush, a Nightjar, some small species of Owl, a Dove, a Quail, and several flights of small birds. M. HENDERSON.

VELVET-SCOTERS, LONG-TAILED DUCK AND GREENSHANKS IN DEVON.

ABOUT mid-December 1920 a party of sixteen Velvet-Scoters (*Oidemia f. fusca*) appeared off the coast of Devon, near Budleigh Salterton, and stayed in the same bay for some three weeks. There were three adult males in the party, and the white wing-bar was very conspicuous when the birds half rose from the water, and flapped their wings. Feeding with them was a fine Long-tailed Drake (*Clangula hyemalis*), which appeared and apparently left with them. Velvet-Scoters are seldom seen in Devon, and adult males of the Long-tailed Duck are equally rare.

While watching these birds on December 18th, I noticed three Greenshanks (*Tringa nebularia*) feeding with a large flock of Curlew on the muddy beach close by. The long dark legs, dark bill, and grey and white plumage were very noticeable. Though formerly a not infrequent visitor in autumn, the Greenshank is now rare in this district, and especially so in winter. W. WALMESLEY WHITE.

PERIOD OF DIVES OF GREAT CRESTED GREBE AND POCHARD.

WITH reference to Mr. G. Bolam's note (*antea*, p. 189) on the diving of the Great Crested Grebe (*Podiceps c. cristatus*) the following observations may be of interest. They were made upon a bird which spent the morning of January 8th, 1921, in short periods of alternate diving and preening on an open piece of water, close to a main road, from which its movements could easily be watched. The dives were not made through fear and were consequently not as long as those made by a bird wishing to escape detection. During periods of five and three minutes it made nine and six dives respectively, and the times spent under water were 20, 25, 12, 17, 12, 20, 22, 25, 25 seconds and 20, 12, 25, 20, 18, 18 seconds. A Pochard (*Nyroca f. ferina*) was also timed during five minutes and it

too made nine dives in that period, of 10, 20, 25, 16, 13, 10, 30, 20 and 20 seconds' duration.

W. P. G. TAYLOR.

LATE STAY OF BRITISH LESSER BLACK-BACKED GULLS.

THE British Lesser Black-backed Gulls (*Larus fuscus affinis*) were very late in taking their departure from the north of England this winter, probably on account of the very open weather.

With the exception of one bird of the Scandinavian race (*L. f. fuscus*) seen on October 20th, 1920, I did not see another until December 23rd, when I saw several.

On October 30th, and again on November 16th, 23rd and 27th and December 1st, there were still a number about, but all of the British race. Between December 2nd and 23rd I saw none of either form.

It may be of interest to add that most of the Great Black-backed Gulls (*Larus marinus*) seen on October 20th were still in summer plumage.

Between December 23rd and January 10th I saw Lesser Black-backed Gulls almost every day, generally pairs and single birds, and on one occasion three, and all were of the Scandinavian race.

On January 11th I saw six together, of which five were Scandinavian and one British, but on January 14th this order was reversed, for of four seen three were British and only one Scandinavian, on the 17th I saw two British and on the 19th one Scandinavian. All these were in full winter plumage. These last British birds may have been returned migrants, for they come very early in the year; last year, 1920, showing the earliest, viz., on January 23rd, although the fact that they were still in winter plumage is against this theory, for spring migrants usually arrive in full summer plumage. One of the British race seen on January 14th, although adult, was a very small bird, and I have noticed this difference several times, the most marked being among a lot of live Gulls which I once saw in Leadenhall Market, where three adult Great Black-backed Gulls were only of the size of Lesser Black-backed Gulls and two of the last named, also adults, very little larger than Common Gulls (*L. canus*). As none of these dwarf birds are ever seen on the breeding grounds, it either points to their being sterile or unable to obtain mates on account of their deformity.

H. W. ROBINSON.

ALBINO YELLOW WAGTAIL IN CUMBERLAND.—Mr. H. H. Farwig informs us that on August 25th, 1920, he saw amongst

a family party of *Motacilla f. rayi* on the shores of Derwent-water, near Keswick, one which was an albino. The general coloration was a dirty white, with exception of the top of the head, and some of the tail-feathers, which were greyish.

GREY WAGTAIL NESTING AWAY FROM WATER.—In connection with previous notes on this subject (Vol. XIII., pp. 56, 81) Mr. H. H. Farwig writes that on April 24th, 1920, he was shown a nest and eggs of *M. c. cinerea* near Groombridge, Kent. It was situated in a roadside bank over 150 yards from a stream, on the banks of which a previous nest had been robbed.

GREAT GREY SHRIKE IN SOMERSET.—Mr. F. H. L. Whish informs us that a female *Lanius c. excubitor* was shot six miles south of Bristol on November 1st, 1920.

LATE STAY OF SWALLOW AND SWIFT IN YORKSHIRE.—On December 29th and 30th, 1920, a Swallow (*Hirundo rustica*) was seen at Sleights, near Whitby (F. Snowden, *Nat.*, 1921, p. 78). On October 31st, 1920, a Swift (*Apus apus*) was reported from Doncaster (E. W. Taylor, *t.c.*, 1920, p. 405) and on November 7th one near Keighley (E. J. S. Craven, *t.c.*, 1921, p. 78).

GREENLAND FALCON IN ORKNEY.—An adult female *Falco r. candicans* was captured at Suleskerry, on February 26th, 1920, and is recorded by Dr. W. E. Clarke (*Scot. Nat.*, 1920, p. 154).

SPOTTED EAGLE IN ESSEX.—Mr. P. M. Meeson, of Rettendon Place, Battlesbridge, Essex, kindly sends me further information about the Spotted Eagle of 1908, referred to on page 209 (*antea*). He saw it on April 10th when it appeared tired and could be approached to within fifty to one hundred yards. On April 13th it was seen four miles to the west feeding on a rabbit, and on the following day it was shot on the same rabbit. The bird is now in Mr. Meeson's possession.—H.F.W.

STEPPE-BUZZARD IN WILTSHIRE.—*Erratum*.—On page 183 (*antea*) line 2 for Eversleigh read Everley.

GARGANEY IN DUMBARTON.—Mr. H. G. Cumming records (*Scot. Nat.*, 1920, p. 153) the presence of a pair of *Anas querquedula* (a scarce visitor to Scotland) on a marsh at Summerston Station, on May 16th, 1920.

FULMAR PETREL BREEDING IN KINCARDINESHIRE AND BERWICKSHIRE AND POSSIBLY IN BANFFSHIRE.—The remark-

able increase of *Fulmarus glacialis* and the extension of its breeding range in Scotland and Ireland during the last ten years has been frequently referred to in the pages of this magazine. Further interesting news on this subject is published in a recent issue of the *Scottish Naturalist*. Ten birds were seen by Miss Rintoul and Miss Baxter on the cliffs at Fowlsheugh, Kincardineshire, in June 1914, but eggs were not seen (*Scot. Nat.*, 1914, p. 215; cf. *British Birds*, VIII., p. 125). Owing to the war these observers were unable to visit Fowlsheugh again until June 21st, 1920, when they counted ten or twelve pairs, and several were sitting and an egg was seen (*Scot. Nat.*, 1920, p. 171).

In the same journal (p. 170) Mr. H. Raeburn states that in May 1920 he saw four "settled" pairs, besides two or three other birds, at St. Abb's Head, Berwickshire. On May 23rd "the females were sitting in the chosen hollows" in very inaccessible ledges, but no eggs appear to have been laid at this date.

Mr. J. Gowan states (*t.c.*, p. 171) that he saw several pairs of Fulmars on July 26th, 1920, on the cliffs at Troup Head, Banffshire, and although no eggs were seen there is little doubt the birds were breeding.

LAND-RAIL IN CUMBERLAND IN WINTER.—Mr. H. A. Booth sends us a note of a *Crex crex* being shot on Clifton Moor, near Workington, on January 3rd, 1921.

REVIEWS.

The Birds of the British Isles and their Eggs. Second Series.
By T. A. Coward, M.B.O.U., etc. Pp. 376. 213
Coloured Illustrations and 69 photographs. $6\frac{1}{2} \times 4\frac{1}{2}$.
(Warne.) 1920. 12s. 6d. net.

It is with great pleasure that we welcome the appearance of the second part of this unassuming and excellent little work. All that we said in its favour when reviewing the first series (*antea*, p. 47) holds good with regard to the second, which deals with the families *Anatidæ* to *Tetraonidæ*. The coloured plates are naturally one of the great attractions of the book. Although not all the plates in Lilford have been reproduced, the exceptions are so few that practically every bird which any ordinary field worker is at all likely to meet with is illustrated, as well as many which he is very unlikely to see in life. Taken as a whole the photographs reach rather a

higher standard than those in the first series ; most of them give some idea of the natural surroundings of the bird or its nest under natural conditions, but the plate of the Spoonbill (pl. 40) is rather an unfortunate exception.

On one point we must condole with Mr. Coward, namely, that his work has been published at a time when our nomenclature is in a transitional stage. We have agreed on the rules under which our names shall be fixed, and the period of research among the older authors and consequent changes is drawing to a close. On the other hand, the results of these investigations have not yet been incorporated into many of our standard works, and the constant attention of a specialist in this department is needed to keep any list up-to-date. Under these circumstances it is inevitable that some of the names employed in this work cannot stand, but these cases are not numerous enough to cause any serious inconvenience.

Mr. Coward's notes have the freshness of the original observer's work in most cases, but a wide knowledge of the literature is also absolutely essential, and occasionally we miss the results of other workers in the same field. Howard Saunders's description of the soft parts of the Grey Lag can scarcely now be maintained ; the recent breeding of the Whooper in Scotland is overlooked ; while eight to ten eggs can scarcely be said to represent the variation in the number of eggs laid by the Tufted Duck. The facts with regard to the breeding of the Long-tailed Duck in Orkney are not quite correctly given on page 62 : the matter was investigated on the spot by the Rev. J. R. Hale and Mr. T. P. Aldworth and the results were reported in *British Birds*, Vol. VII., p. 205. Although the Spoonbill frequently feeds out on open mud flats, it is decidedly secretive in its breeding habits, and its nests are usually among reeds ten feet or more in height. It is incorrect to state that the Green Sandpiper is the only regular arboreal nester of the group, for this description applies equally to the Solitary Sandpiper. It is also misleading to state, as is done on page 244, that the Gull-billed Tern "breeds on the western shores of Europe from Denmark to Spain." We have met with it breeding in Denmark and also in south Spain, but do not believe that it nests anywhere on the western shores of Europe between these two places. Probably 74 represents the number of known eggs of the Great Auk more accurately than 63 as stated on page 266. Perhaps in a future edition Mr. Coward may be able to incorporate these corrections.

As previously stated, the egg plates are not nearly so successful as those of the birds, and indeed in some cases are barely recognizable. This applies particularly to some of the Anatidæ (*e.g.* the eggs of Gadwall, Eider, Tufted Duck, etc.), but also to some of the figures of the Waders' and Gulls' eggs.

From beginning to end the book shows on every page the work of a man who knows his birds in life, and the high standard set by the writer in the first series is well maintained in this. The work was worth doing and has been thoroughly well done.

F. C. R. JOURDAIN.

Report on Scottish Ornithology in 1919 including Migration.

By L. J. Rintoul and E. V. Baxter. Forming July-August 1920 issue of the *Scottish Naturalist*.

THIS yearly Report is once again presented in its well arranged form and is full of interest, especially to students of distribution and migration. The following observations, not having been previously mentioned in *British Birds*, may here be quoted.

ORTOLAN BUNTING (*Emberiza hortulana*).—A male and two females on May 7th at Noss Head and one on May 11th at Lerwick (Shetland).

BLUE-HEADED WAGTAIL (*Motacilla f. flava*).—One on Fair Isle, May 10th to 12th.

BLACK REDSTART (*Phœnicurus o. gibraltariensis*).—One on October 17th at Noss Head.

BEE-EATER (*Merops apiaster*).—One on August 23rd at Lentrán (Inverness).

HOBBY (*Falco s. subbuteo*).—One on October 27th on Fair Isle.

ROUGH-LEGGED BUZZARD (*Buteo l. lagopus*).—One on May 8th on Vallay (Outer Hebrides), where one was recorded on April 28th, 1918.

BLACK-TAILED GODWIT (*Limosa limosa*).—One on September 20th in Monifieth Bay (Forfar), and two on November 14th at Luce Sands (Wigtown).

LETTER.

KESTREL TAKING A DUST-BATH.

To the Editors of BRITISH BIRDS.

SIRS.—I was much interested to hear on good authority that on December 18th, 1920, during a short period of frost, and hence comparative dryness, a Kestrel (*Falco t. tinnunculus*) was observed to dust itself, just as domestic fowl, game-birds, etc., do, on a stretch of raked gravel within twenty yards of a house.

I knew that the Falconidæ indulged in water-baths, but had never heard of them partaking of a dust-bath.

W. RUTTLEDGE.

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ORNITHOLOGICAL NOTES FROM NORFOLK FOR 1920.

27TH ANNUAL REPORT.

BY

J. H. GURNEY, F.Z.S.

(Assisted by Members of the Norwich Naturalists' Society.)

IN presenting the report for 1920, I may remark that there are not so many personal observations as usual, but that does not signify, as friends have supplied notes, and especially my good correspondent Mr. Caton-Haigh has furnished those from Lincolnshire.

The Spring Migration of Birds.—There is little which calls for remark in 1920, nothing very unusual took place, but there is one thing which is most unaccountable, and that is the non-appearance in spring of the vast flocks of migrants which arrived during the preceding autumn. The only solution is that six months have been sufficient for the death of most of the birds which composed them, but some may return another way.

March was a dry month, yet I have never seen the country look so green as it did this spring, for April was wet (3.50 rain) and this brought the verdure on. Jubilant Woodpeckers continued hammering for six or seven hours at a stretch, Thrushes tuned up gaily and Mr. F. C. Cook had the unusual pleasure of listening to Redwings singing in chorus in a tree.

The Curlew again bred near King's Lynn, and the Sandwich Tern is suspected by Mr. Pashley of having had eggs at Blakeney.* Hawfinches nested at Keswick, and Reed-Warblers on the Yare at Cringleford, while Mr. Tracy's notes are evidence of the breeding of Crossbills in more than one locality in the west of Norfolk.

The Autumn Migration.—The autumnal migration of birds to our coast-line usually commences at the end of August, and I believe it was punctual. Its maximum duration lasts from two to three months, sometimes spasmodically, at other times with an even flow according to the wind and the amount of moisture present in the atmosphere. If an observer be situated about a mile from the sea or nearer, say at Cromer or Northrepps, where I have often spent September and October, and has the energy to get up at

* Since confirmed by Mr. Borrer.

sunrise, he will be pretty sure now and then to see the tail end of the night's migration. In indication of this a few entries in last year's Journal may be quoted:—"September 14th, 1920. At 5 a.m. it was too dark to see any migrants, nor could any be heard passing over. September 16th, 7 a.m. Wind S. 1. Light enough to see several finches, probably Chaffinches, coming in from the direction of the sea. September 25th. A thick mist, no birds visible, but this does not necessarily mean that migration is suspended, for under such conditions they would presumably rise to a much higher altitude. September 29th. The wind has changed to the south-east, which according to Gätke (*Heligoland*, p. 76) is what brings migrants nearest to the earth's surface. October 3rd, 7 a.m., S. 2, light pretty good. A certain number of Starlings coming from the sea, some Chaffinches, three Blackbirds and a Mistle-Thrush or two, four Blue Tits flitting from tree to tree."

Migration in Lincolnshire compared with that in Norfolk.—In Lincolnshire things seem to have gone rather differently, for there Mr. Caton-Haigh informs me, the first "rush" of birds was considerable. It began on September 30th and coincided with a movement of Lapwings going west at 6 a.m. in Norfolk. As far as Mr. Haigh's observation went, it consisted almost entirely of Robins and Thrushes, with Redstarts, Goldcrests, Bramblings, Chaffinches and Tree-Pipits in very small numbers. The wind on that day was east, force 4 at Spurn Head, and south 2 at Cromer, but changed a little in the afternoon. This flight was nearly over by October 6th, but a fresh immigration took place on the coast of Lincolnshire on the 9th (wind N.E. force 2 at Spurn), consisting of Goldcrests, Robins and Redwings, with a few Ring-Ouzels and Rock-Pipits. This fits in with Mr. Ben Dye's Yarmouth notes, as well as with those of another good observer, who writing from near the coast, says (*in litt.*): "October 9. Hooded Crows migrating west in good numbers, Ring-Ouzels, Redwings, Goldcrests, Long-tailed Tits and Marsh-Tits are very much in evidence there are great numbers of birds to-day." From their geographical position, Lincolnshire and Norfolk have much in common.

The removal of the Leman and Ower Lightship calls for some remark, as this was an admirable observatory, especially before the lights were made to revolve (see *Zoologist*, 1912, p. 123), and one from which I have had some good wings of birds (forty species or more). The Newarp L.V.

which lies off Yarmouth has been another excellent post of observation, and from it the late Mr. Booth, of Brighton, received many hundreds of wings, but of recent years they have not been collected. A new Lightship, the "Cromer Knoll," has now been anchored twenty miles N.N.E. of Cromer, and is in charge of an officer who promises to keep bird notes, with what result we cannot yet say.

CLASSIFIED NOTES.

HOODED CROW (*Corvus c. cornix*).

Early southward passage.—It would seem that this passage is almost annual, and that it generally takes place on or near the coast, which acts as a useful guide line to so many birds, only in the case of the Hooded Crow the movement is too early to be called autumnal migration. A Hooded Crow was detected by Mr. C. G. Doughty on June 11th, and on the 13th Mr. Arthur Patterson saw no less than ten, while on July 22nd Dr. Long came across a couple at Horsey, which seemed to be young ones. These would appear to have been the advance guard following the coast from more northern counties, or from Scotland, and not home-bred birds as might be at first supposed. Nidification in Norfolk, although suspected, has never been actually proved.

CARRION-CROW (*C. c. corone*).

Unlike the Hooded Crow, the Carrion-Crow breeds every year in Norfolk, but in very small numbers; there is very little proof of its receiving migratory additions in the autumn, although in this connection the observations of Professor Newton (*Zoologist*, 1878, p. 49) must be taken into consideration. I preserve two pair at Keswick and they reward me by stealing eggs. On June 13th I saw one of them attack a Waterhen.

HOUSE-SPARROW (*Passer d. domesticus*).

September 24th. Three flocks to-day, each about two hundred yards from the cliff, containing fifty Sparrows or so apiece, for the most part immature. The question has been often asked whether the flocks of House-Sparrows, which are to be seen every autumn—especially in September—near the low line of cliffs running for several miles to the east and west of Cromer, and in many other parts of the coast, are migrants from over the sea. If the evidence of our Norfolk floating lightships, such as the "Leman and Ower," is to be accepted, the answer must be in the negative, for among the many wings which have been furnished by these

observatories, the House-Sparrow has never, I believe, been represented, nor among the numerous birds coming in from the direction of the sea have I ever identified this species. They will, however, sometimes accompany a ship from one port to another, and in that way a few may cross the North Sea. On the other hand Dr. C. B. Ticehurst has seen Sparrows on the denes at Lowestoft under circumstances which led him to think they were migrants,* although here there was no absolute proof.

YELLOW BUNTING (*Emberiza c. citrinella*).

September 28th, S. 1. To-day the number of Yellow Buntings on Cromer hills was very noticeable, but when fishing for pollack yesterday I observed nothing pass. I do not remember to have had this species from our floating lightships, although Snow-Buntings have been occasionally sent, and also the Reed-Bunting, but that it is essentially a migrant can hardly be doubted, and the observation of the Duchess of Bedford (*antea*, p. 214) goes to prove it.

WOOD-LARK (*Lullula a. arborea*).

Wood-Larks never breed in north Norfolk, and are practically unknown on my side of the county, except at the end of the year, when the first fall of snow generally brings a few to the coast. One was seen at Lowestoft on December 19th by Mr. F. C. Cook, and some more caught at Yarmouth in a clap-net (B. Dye), while soon afterwards a little flock of five were identified at Trimmingham by Mr. Davey.

SKY-LARK (*Alauda a. arvensis*).

During the summer, my correspondent, Mr. Tracy, of Lynn, came across several nests, with the young ones lying dead on the ground, probably for some reason their parents had been unable to find them a sufficiency of food.

WHITE WAGTAIL (*Motacilla a. alba*).

Two are believed to have been identified in the spring, one on April 18th, and a female which was caught alive on March 30th (E. C. Saunders), near Yarmouth.

GREAT TITMOUSE (*Parus major*).

At the end of October birds described as "Blackcaps," but more probably some species of Titmouse, visited the Cromer Knoll lightship, while on November 16th the large number of Great Tits in the allotment gardens at Yarmouth suggested to Mr. Dye a migratory arrival. It is seventy-three

* *Norwich Naturalists' Trans.*, IX., p. 612.

years since my father was the first to draw attention to this species being a migrant.*

GOLDEN-CRESTED WREN (*Regulus regulus*).

Though the British Goldcrests were greatly thinned by the tremendous frost on February 2nd, 1917, the number of autumn migrants shows very little diminution, if we may judge from what was seen in Lincolnshire by Mr. Caton-Haigh on October 9th, 10th, 11th and 12th, and simultaneously by several Norfolk observers. Many hundreds of them made land at Sheringham, Trimmingham, Mundesley, Caister and Yarmouth. At Yarmouth Mr. Saunders reckoned up little parties of three, five and six disporting in the bushes, where ten at least were killed by prowling cats, and picked up by the park-keeper (A. Patterson). Still more were seen by Dr. Riviere, and at sea by the master of the "Cromer Knoll," while it would appear that the migration even extended to Switzerland.†

GREAT GREY SHRIKE (*Lanius e. excubitor*).

One of my correspondents, who is a very smart observer, reports several near the coast in November, and about that time Mr. Gunn had one from Wells. They generally seem to follow the line of the sea, but Norfolk does not get these handsome Shrikes every year.

WAXWING (*Bombycilla garrulus*).

Nine Waxwings were seen on December 18th by Mr. Upcher feeding on haws at Sheringham, and a month later they were still there. Another was picked up at South Walsham, and later a couple were seen by Dr. Long in a garden at Norwich; two were also reported from Hethel (H. Halls), and a flock of twelve from near Yarmouth (A. Patterson). The last visitation of importance was in 1913-14.

WOOD-WARBLER (*Phylloscopus s. sibilatrix*).

Identified by Mr. W. G. Clarke at Ringmere on April 18th.

BLACK-BELLIED DIPPER (*Cinclus c. cinclus*).

Mr. Davey reports one at the end of February on the Aldborough stream, where it stayed for some time, generally roosting on the fly-wheel of the mill engine. In addition to the two recorded last year, there was one on the little stream at Hempstead. All the Norfolk Dippers seem to be of the Scandinavian race, although one or two have shown

* *Zoologist*, 1848, p. 2071.

† *Nos Oiseaux, Bulletin de al Société Romande*, 1920, p. 16.

a tint of chestnut, but the presence of *Cinclus c. britannicus* in Norfolk has not yet been proved.

CUCKOO (*Cuculus c. canorus*).

On May 23rd Mr. Tracy whilst hunting through a reed-bed at North Wootton, found a Reed-Bunting's nest containing one Cuckoo's egg and three Bunting's slightly incubated. On the 24th in the same reed-bed he found a Reed-Warbler's nest containing a Cuckoo's egg, and four Warbler's; on the 27th another Reed-Warbler's nest with one Cuckoo's egg and two Warbler's; on the 28th another nest with one Cuckoo's egg and one Warbler; on the 30th another, with one Cuckoo and one Warbler; on June 9th another with one Cuckoo and two Warbler's; on the 15th another with one Cuckoo and one Warbler. The eggs were of the freckled brown type, but some of them had also fairly large black spots; on one occasion at about 7 a.m. two Cuckoos flew out of the reed-bed.

LITTLE OWL (*Athene noctua mira*).

LONG-EARED OWL (*Asio o. otus*).

BARN-OWL (*Tyto a. alba*).

Increase of the Little Owl.—The Little Owl continues to spread over Norfolk in the most remarkable manner, discovering plenty to eat without molesting game. It appears that it will feed, among other things, upon the large dung-beetle (*Geotrupes*), and these Major Gurney finds it gets by searching patches of horse dung; I believe the Tawny Owl to have the same occasional habits (see *Zoologist*, 1915, p. 139). May 12th. Inspected a Long-eared Owl covering four young ones under a gorse bush, the situation was unusual, and so was her subsequent behaviour for she carried two of her nestlings, in consequence of their being looked at, more than twenty yards and deposited them on a pair of young Scotch firs, where they presented a very comical appearance.

On March 5th I was offered a Barn Owl with a white tail, an albinistic phase in which the bars are wanting, or very indistinct, perhaps not uncommon.

FALCONIDÆ.

Birds of Prey.—As usual two or three Buzzards were announced, probably *Buteo lagopus*, but no Ospreys or Sea-Eagle. Nevertheless, the occurrence of a young Golden Eagle (*Aquila ch. chrysaetus*) at Spilsby on the north side of the Wash (*Naturalist*, 1921, p. 80) was a very notable event. Only one Honey-Buzzard (*Pernis a. apivorus*) was taken (October 5th) in Norfolk.

In Lincolnshire Mr. Caton-Haigh saw and heard of seven or eight Peregrine Falcons (*Falco peregrinus*), of which three were netted by plover-catchers. They are commoner on passage than is generally supposed, one attended my son when out shooting on November 19th, and swooped at the Teal he put up.

On July 22nd Dr. Long disturbed a Montagu's Harrier (*Circus pygargus*) on Horsey Warren, where it was making a meal off a rabbit. In several places this species now receives protection, its transgressions being condoned for its beauty. The melanistic variety recorded last year (*antea*, XIII., p. 260) did not return, so it is to be feared it was shot—but not in Norfolk; even when a nestling it was considerably darker than the rest of the brood.

SPOONBILL (*Platalea l. leucorodia*).

Spoonbills paid their customary visit to the attractive mud-flats of Breydon, but were somewhat late this year. It was not until May 20th that a pair—following a high wind which sprang up in the south-west (W.S.W., force 5 dropping to 2)—put in an appearance. They seemed to like their quarters but probably left them temporarily at high tide, for on May 31st they were reported to Mr. Dye as coming in from seaward, and flying low. According to the watcher this pair stayed three weeks, leaving on June 9th with a fresh north-east wind, against which they must have had to make headway. Another Spoonbill came on June 14th (E. 3, with rain), but only stayed about four days, and that was all.

It is several years now since the watcher on Breydon Broad was requested to put down the direction of the wind whenever a Spoonbill presented itself on the muds—that is if in his opinion it was a new arrival. These notes which it is believed have been accurately kept, and which in some cases were verified from the official returns made by the Yarmouth coastguard station now extend over many seasons, and refer to 118 Spoonbills.

On making an analysis of them it is found that sixty of the entries give Spoonbill arrivals when the wind was north-east, or due north, and fourteen when it was north-west, while thirty-two Spoonbills were first seen with a wind blowing from due west or south-west. It is May and June when the Spoonbills generally come to Breydon Broad, and the above figures indicate a wind from the north-east as being the most likely to bring them, yet it can hardly be from the north or

north-east, that is to say, from Denmark and Sweden, that they really make their journey.

On the other hand, if it is from Texel on the coast of Holland, as is usually supposed, their line of flight must be against the wind rather than with it. In any case if they stop on Breydon they are non-breeding birds, although with protection and encouragement this might be altered, for long ago they nested in at least seven places in the county of Norfolk, and would possibly do so again.

The local Protection Society, however, which owed its origin to Sir Edward and Professor Newton, is so short of money—Yarmouth people seeming to take no interest in it—that there is a good chance of protection being withdrawn altogether.

GLOSSY IBIS (*Plegadis f. falcinellus*).

On September 18th Mr. Gunn received an immature Ibis from the neighbourhood of Barton (*antea*, p. 162), and on October 3rd another was shot on the marshes adjoining Breydon. These visitors seem generally to come in a flock and disperse; in 1909 Norfolk, Yorkshire and Ireland had between them about twelve, while in 1912 eleven were recorded, but 1920 was a stronger migration than either of the other two.

BITTERN (*Botaurus s. stellaris*).

Bitterns were seen or heard on most of the larger broads during the spring, in fact, on May 17th Dr. Ticehurst and Mr. R. Gurney had as many as three in sight at once. The only nest which it was my lot to examine contained one young one on May 11th; this was a normal date, but I also heard on the best authority of three newly-hatched chicks being found as late as July 2nd in another locality.

BEWICK'S SWAN (*Cygnus b. bewickii*).

On November 1st flocks of eight and twelve were viewed on the coast by a very competent sportsman, five more on December 15th, and about forty on the 17th, these latter, no doubt, driven south by the fall of snow. There is evidently an annual passage of these Swans (and sometimes of Whoopers) in November (*vide* Vol. XII., p. 251), but they commonly pass on over Norfolk without alighting.

WHITE-FRONTED GOOSE (*Anser albifrons*).

We always get a few, but forty-two in one flock seen by Miss Best, on the Holkham marshes at the end of February was an unusual number. They flew in from the sea and joined

the herd of Pink-footed Geese, which annually frequent these salt marshes ; here they remained and on two occasions Miss Best managed to crawl within tolerable distance and obtain a good view. Mr. Caton-Haigh tells me that geese have been fairly plentiful in north Lincolnshire where he was lucky enough to shoot three species, getting during one week—Grey Lag, White-fronted and Pink-footed.

ANATIDÆ.

On April 3rd Dr. Long saw a hundred Wigeon (*A. penelope*) on the Wretham Meres, and on May 12th Colonel Sparrow counted five or six pairs of Gadwall (*A. strepera*), and fifteen or twenty pairs of Tufted Ducks (*Nyroca fuligula*) there, and and some Shovellers (*Spatula clypeata*), besides finding three Shovellers' nests. On the same day I saw four Shoveller ducklings, only a few days old swimming with their parent in a ditch near Hoveton Broad, they are a good deal commoner than they used to be before they got protection.

FORK-TAILED PETREL (*Oceanodroma leucorhoa*).

One washed up at Gorleston on November 28th (C. Doughty) and another seen on Barton Broad on December 5th by Mr. Tracy after a gale from the north-west. On looking over previous Norfolk records it appears—omitting two or three which are doubtful, and others which are undated—that eight of our Fork-tailed Petrels can be assigned to October, eight to November, ten to December, and one to July. This last is an unaccountable date, but there is no doubt about it. The bird was stuffed by a taxidermist named Carter and belonged to Mr. J. G. Overend, and was sold with the rest of his collection in 1876. The ordinary period of their occurrence is the last two months of the year, when unsettled weather is supposed to drive them ashore.

GREAT CRESTED GREBE (*Podiceps c. cristatus*).

Plenty on Filby Broad on March 7th (Patterson).

September 27th. The Rev. M. C. Bird writes : " Whilst shooting at Stalham to-day, a man at plough caught and brought to us an uninjured Grebe which had, perhaps, lost itself in last night's fog." The bird when found was in a dry field ditch.

BLACK-NECKED GREBE (*Podiceps n. nigricollis*).

The probability of this Grebe—well known to Pennant as a breeder—having nested in Norfolk, which has been referred to before (Vol. X., p. 241 ; XII., p. 242 ; XIII., p. 263) is further increased by the circumstance of a pair having been seen by Dr. Riviere and Col. Todd on a small Broad near

Norwich on July 14th. How long these Grebes, which were in full breeding plumage, had been there Col. Todd does not know, but he had seen them the week before. Soon afterwards (date omitted) one was reported by a reliable observer at Horsey, where it was joined by a companion in August.

LITTLE GREBE (*Podiceps r. ruficollis*).

October 11th. My son and I were walking beside the river Yare when we saw a small pike, of about two pounds, struggling with something in the water, which proved to be a Dabchick; how long the bird had been there it is impossible to say, but it was still alive, although quite unable to free itself from the sharp incurved teeth of the fish.

DOTTEREL (*Charadrius morinellus*).

Owing to the foolish practice of, formerly, shooting them on their spring passage the Dotterel has now become quite a rarity. A pair, the female with ova the size of peas, brought to Mr. Cole on May 19th had been benefiting the farmer by eating numerous wireworms which Mr. Cole found on dissecting them. I do not see any note about Dotterel in the "Reports" since 1907.

TEMMINCK'S STINT (*Erolia temminckii*).

September 30th. A couple on one of the Broads.

SPOTTED REDSHANK (*Tringa erythropus*).

Spotted Redshanks seem to have been almost numerous at Blakeney from the reports of Mr. Richards and Mr. Borrer (*antea*, p. 164) and on August 21st one was picked up as far inland as Coltishall. The Common Redshank (*T. totanus*) was also pretty abundant, and a pair are believed to have bred at Costessey above Norwich (W. H. Andrews).

AVOCET (*Recurvirostra avosetta*).

Mr. Patterson announced a couple of Avocets on Breydon Broad in the early days of June and these were probably the same pair reported to Mr. Dye as flying south along the beach on June 11th (S.E. 4). Breydon Broad has long been a favourite feeding ground for Spoonbills and Avocets, but it is altering rapidly for the worse. It is now more fittingly to be described as Breydon muds, so much of what was once navigable water having silted up.

BLACK-TAILED GODWIT (*Limosa limosa*).

On December 20th a fine adult Godwit was shot on Breydon flats by Mr. Wyllip, and another seen; although not very uncommon in autumn, their occurrence so late in the year is most unusual.

CURLEW (*Numenius arquata*).

On May 21st Mr. Tracy saw a pair of Curlews on a large fen near Lynn, and again later, but could find no trace of a nest; nevertheless he has no doubt of their having bred, for on June 23rd a young Curlew able to fly, was seen. They are, of course, common enough in winter on our coast.

GREAT BLACK-BACKED GULL (*Larus marinus*).

A large unknown Gull, which appeared to be quite white, visited Breydon Broad at the beginning of September, where it was watched by Mr. Patterson on the 8th. Subsequently it was shot, and identified by Dr. Riviere as a variety of *L. marinus*, but not an albino, the tail being partly light brown, although this was invisible at a distance.

LAND-RAIL (*Crex crex*).

A Land-Rail was shot on December 10th, that being the identical date on which one was recorded in 1913. It had, however, been seen to rise from the sedge on two previous occasions.

WATER-RAIL (*Rallus a. aquaticus*).

On November 13th a Water-Rail was shot at Costessey, in which the back, nape and head were so much darker than usual, as almost to amount to incipient melanism. But what rendered this example still more curious was that when Mr. Gunn skinned it he found it to have a double ovary; this, although decidedly uncommon, has been observed, it would seem, twice before in the Water-Rail, see *Proc. Zoological Soc.*, 1912, p. 78.

COMMON PARTRIDGE (*Perdix p. perdix*).

Erythristic Variety.—On January 24th a fine adult of the spangled variety known as the Mountain Partridge was run down at Bawdeswell, in which neighbourhood this singular race first appeared in 1896, and hardly a year has passed since then without one or more having been seen, yet no protection has been given them. The plumage is always the same, allowing for differences of age, the red colour beginning to appear at the first moult, and then the head turns yellow. A somewhat similar erythrism has been known to occur in Grouse, see *Bull. B.O.C.*, XXV., p. 40.

NOTES FOR SEASONS 1918-19-20, ON THE IRISH COLONIES OF SANDWICH AND ROSEATE TERNS DISCOVERED IN 1917.

BY

C. J. CARROLL.

SINCE the discovery in 1917 of new colonies of Sandwich (*Sterna s. sandvicensis*) and Roseate Terns (*S. d. dougallii*) "somewhere in Ireland" (*British Birds*, Vol. XI., pp. 122-4), I have been able to visit the locality each year, so that additional particulars may be of interest.

In 1917 twenty-three pairs of Roseate Terns were breeding, and of the hundred or more Sandwich Terns' nests then examined, the great majority held no young so late as the beginning of July. When recording this I remarked: "It was an unusual date for this early Tern to have so many eggs unhatched, but no doubt the very severe spring had affected them." Greater experience disproves that conclusion.

Determined that my arrival in 1918 should coincide with the normal nesting time, I reached the locality on May 22nd. But, on getting out to the old ground—it is an island retreat—my dismay was great to find neither of the rarer species there, and only a very few Common Terns (*S. hirundo*) which had just begun to make depressions in the rough herbage preparatory to laying. The inevitable Ringed Plovers (*Ch. hiaticula*) and Oystercatchers (*H. ostralegus*) had eggs, and a thorough search of the whole place, which is quite limited in extent, revealed the one and only egg of a Sandwich Tern it contained, but there was no sign whatever of the birds themselves! I came away very depressed, deciding, however, to go back along the coast in search of them. And there, on an extensive sandbank some two miles from the island, a vast congregation of Terns were resting from their labour of fishing, and generally preening themselves and idling in the evening sun. By far the larger portion consisted of Common and Arctic Terns (*S. paradisca*), but the glasses revealed a fine group of Sandwich Terns interspersed with several pairs of Roseates.

Two of the latter species looked particularly handsome, as the wonderful pink flush was vividly apparent in the sunlight. Curiously, the breasts of some individuals in full summer dress are as colourless as those of their less fortunate brethren in glass cases. But at all times a Roseate Tern is easily distinguishable by its absolutely unmistakable

voice, its shape and flight, the "streamers" and the colour of its bill. Even at a distance in the air, its "cleanness," a most noticeable transparent whiteness, renders it as conspicuous amongst its other Tern companions as a country Sparrow in a crowd of town relations. At the end of the first week in June I again visited the island where all the birds were then ensconced. About fifty pairs of Sandwich Terns had eggs, but many had not yet started to lay. The Roseates had so far only laid five clutches in much the usual situation on the outskirts of the ground away as far as possible from the general din and their eggs were well shaded by the bladder campion which grows there in profusion.

By June 25th there were more than one hundred and ten pairs of Sandwich Terns altogether and unlike the previous season they had all settled down into one large group. In several cases the young were emerging and the domestic arrangements of the Common and Arctic Terns were at a similar stage, but all the Little Terns (*S. a. albifrons*) had hatched off. Only two more pairs of Roseate Terns were breeding and in one set of two, each egg was quite different. One with a distinctly light almost white ground was encircled near the centre by a broad band of very dark spots and blotches, a rare and exceptionally beautiful type; while the other, also heavily marked, had a brown ground, much darker than the normal. The owner was extremely shy—this is not usual with a Roseate—and the ground did not permit of any hiding, nevertheless, as a reward of patience, I saw her on to them several times. The second nest, because of its situation, was most interesting and was only discovered by the merest chance. Just as I was stepping into the boat for the return journey, I happened to notice a Roseate Tern flying about in the midst of an excited flock of other Terns over a very congested portion of the breeding ground. As she appeared interested in a particular spot I returned, keeping her in view through all her aerial manœuvres. Many attempted landings were frustrated by the aggressive behaviour of the general throng, but persistence eventually triumphing, she alighted in peace. Rushing over, I flushed her from a single egg to which she returned as soon as possible. It was laid on the flat, bare ground, amongst the busiest confusion of the whole colony! Certainly, some rather tall, straggling plants at a distance formed a kind of background, so possibly at one time the egg, then not far from hatching point, may have been shaded by these which grew up as incubation proceeded. At that time, however, it was completely exposed and is

the first instance here of a bird of this species choosing such a site. Other Roseates careering around had not yet begun to nest, for the majority are late breeders in this locality. Previous experience and rough weather deterred me from crossing in 1919 until June 15th. The Sandwich Terns had decidedly increased in numbers and extended their range. There were roughly one hundred and fifty nests with eggs in four groups, no young being then out. Some few Roseates were present and, although no eggs were found, a pair or two may have laid. The other three species were less numerous than usual, and I was unable to visit the place again that year.

In 1920 a totally different state of affairs existed. With the exception of a very few ordinary Terns, no birds were frequenting the favourite sandbank at the end of May and in a walk along the shore only a solitary Sandwich Tern passed me. On rowing out to the island little bird-life was visible, and none of that beating to and fro over their fishing grounds, so characteristic of former years. An ominous silence brooded over the island, and what is so depressing as a deathly stillness where hitherto the turmoil and babel of a multitude of Terns has reigned? However, although practically no Terns of any kind were there—a Sandwich or two did fly over, very high up and quite disinterestedly—it was not long before I found twenty nests of Sandwich Terns containing one egg each, and one nest with two eggs. They had the “bloom” of freshly laid eggs, so I thought that possibly the females had gone fishing and would return to complete their clutches, although this would be contrary to their usual procedure of starting to incubate immediately the first egg is produced.

Two days later things were in the same state; half a dozen birds passed over without showing any inclination to alight, but there was still hope that they would return to the nests and that the main body, wherever they were, would yet arrive.

The end of the first week in June brought no change, except that a flock of Herring-Gulls (*L. a. argentatus*) which arose with lamentations at my arrival, had quite recently sucked a large proportion of the eggs. All the Terns were absent, but a few Little and Common Terns were breeding on the shore of the mainland.

My boatman had seen them arriving as usual earlier in the year, and the fishermen were then meeting with flocks out at sea. I suggest, therefore, as an explanation that the food supply had locally failed and that all the Terns had

moved away to follow the fish. No doubt the few that attempted to lay were subsequently induced to follow. The facts are indicative of this, especially as the birds, which were never unduly disturbed, did not breed anywhere in the vicinity ; and later I met with many adult Sandwich Terns, more than twenty miles farther west, which spent their days in fishing and wheeling around very high in the air after the manner of non-breeding individuals. Probably in no other colony in the British Isles are all five species of Terns found breeding together in such a limited area.

NOTES

NOTE ON BREEDING-HABITS OF LESSER REDPOLL IN DORSET.

To the interesting notes on the breeding-habits of the Lesser Redpoll (*Carduelis linaria cabaret*) by Messrs. Ingram and Salmon (*antea*, p. 159), I should like to add that I think the appearance of *three* birds at the nest is not very unusual and not easily accounted for. I have not had a great deal of experience with this species during the breeding-season, having found only about a dozen nests, but I well remember at the first nest I found being puzzled at the presence of two females and one male. All three together flew into a small birch tree entwined with honeysuckle, in which the nest was situated. One of the females entered the nest and began to arrange the brim, while the other female and the male engaged in antics very similar to those described by Messrs. Ingram and Salmon, their attitude towards one another appearing sometimes amorous and at other times hostile.

I have twice since witnessed similar incidents, and at one nest in course of construction I noticed four birds mixed up in a scuffle similar to those so often indulged in by the common House-Sparrow but in this case they appeared to be fighting for possession of the nest.

It is quite a common sight in spring before nesting begins, to see three and sometimes four birds in company wheeling and twisting about over the tree-tops, uttering their trilling notes, and it might be worth mentioning, as far as my observations go, that during the building of the second nest (this species is certainly double brooded—here in Dorsetshire at any rate) the behaviour of the breeding pair is quite normal, with no interference from others, although three or four pairs may be nesting in close proximity—I have known three occupied nests within a stone's-throw—and it is at *first* nests only that I have noticed this communal habit.

W. J. ASHFORD.

POSSIBLE MIGRATORY MOVEMENT OF YELLOW BUNTINGS IN BEDFORDSHIRE.

SINCE my letter (*antea*, p. 214) has not elicited any very definite information of a migration of Yellow Buntings (*Emberiza citrinella*) on the night of December 29th, 1920, my own observations may perhaps be worth recording. On that night I was called down to my hospital late in the

evening and turned up the very bright lights of the operating theatre, which has a large window extending three-quarters of the width and height of the room. After the light had been turned on for a time a Yellow Bunting flew in, and shortly after another flew against the glass. I caught the bird and put it in a basket for the night, letting it out at dawn next morning, when it flew away quite strongly and uninjured. The night was thick and wet. The birds might have been disturbed by an Owl, but it was about 9 p.m. When working in this theatre during the last six years, I have often noticed birds which are aliens to Woburn, such as Gulls, Waders, etc., take the line of flight which passes over the hospital, so much so that a pair of field-glasses has become part of the theatre equipment. Still the evidence of migration is slight, and I record it only for what it is worth.

M. BEDFORD.

SPRING MOVEMENTS OF PIED WAGTAILS IN BERKSHIRE.

SINCE the middle of January we have had flushes of Pied Wagtails (*Motacilla a. lugubris*) in Reading; sometimes half a dozen running and calling on roof-trees and chimneys. At sunset on February 15th I counted twenty on my tennis-court; on February 19th, thirty-six at one time; on February 27th, seventeen. As only a single pair ever nest in my garden, these must have been migrants. They were not feeding, but courting, preening and fighting, and were chiefly immature. There were no White Wagtails (*M. a. alba*) with them.

H. M. WALLIS.

WHITE-TAILED EAGLE IN DERBYSHIRE.

ON December 20th, 1920, an Eagle was observed on the moors near Derwent, in north Derbyshire and south-west Yorkshire, and on January 9th, 1921, accompanied by a friend, I was fortunate in having a good view of the bird on the wing. It appeared over the sky-line, making for the wood where we were, but seeing us swerved away, gradually rising without any perceptible movement of the wings to a great height, and finally disappearing over the hills on the other side of the valley. On February 8th, the Eagle was shot from a "hide" when returning to the plantation in which it had been observed to roost, close to the Yorkshire border. It proved to be an immature White-tailed Eagle (*Haliaeetus albicilla*), with the characteristic heavy bill, wedge-shaped tail and bare tarsi. The span of its wings was 7 ft., weight 10 lb., total length 36 ins. Iris dark brown, cere dull yellow, bill

dark horn colour, feet yellow, claws black : no white on tail. Castings examined showed beak and bones of Grouse, bones and fur of hare (also probably rabbit) and traces of sheep's wool, most likely from carrion.

C. H. WELLS.

BITTERN IN CO. ANTRIM.

MR. W. H. WORKMAN (*antea*, p. 224) seems to have misunderstood Ussher and Warren's statement regarding the Bittern. In their *Birds of Ireland* they cite the counties in which seven or more specimens have been obtained, only mentioning Leitrim, Cavan and Londonderry as the counties from which no notices appear. In their summary are included Thompson's records, among which are three from co. Antrim, viz., Bog Meadows, Belfast, January 27th, 1811; Claggan, February 8th, 1838; and near Ballymena, February 1839.

NEVIN H. FOSTER.

THE RUFF—AN EARLY RECORD.

WITH reference to Mr. W. H. Mullens's interesting article, "The Ruff—an Early Record" (Vol. XIII., pp. 13-20, and note, Vol. XIV., p. 68), which deals with a black letter pamphlet of 1586, the following information may be of interest.

In the *Field* of May 29th, 1909 (p. 897) there is a short paragraph, entitled "A Rare Tract on the Ruff," dealing with a similar pamphlet which was sold "last week for £4 14s." Messrs. Sotheby, Wilkinson and Hodge have informed me that this pamphlet was sold by them, as Lot 381, on May 20th-21st, 1909, but they are unable to give such information as would enable its present whereabouts to be traced, though prior to the sale it was the property of Lord Dormer. The paragraph in the *Field*, which is unsigned, states that although there is no copy of the pamphlet in the British Museum, there is a German translation published at Augsburg in which it is stated that a Dutch translation had already appeared at Middelburg.

An examination of the British Museum pamphlet (Press Mark 12314. d. 34 (2)) proves it to be but an abbreviated paraphrase, published in 1587, and omitting fully one-third of the original. The woodcut of the Ruff occupies nearly one half of the title-page and is quite different from that in the English edition. The cut has been coloured by hand and is easily recognizable as a Ruff, but of gigantic proportions, which stands between and overtops two men who are apparently much surprised at its appearance. In the background a castle with its dependencies stands at the foot of a

mountain range. Red, green and purple are the prevailing hues in the plumage of the gigantic Ruff.

I found at the British Museum another translation (Press Mark 1750 C. 1 (27)) of this quaint old English pamphlet. This is a broad sheet (undated) published at Nurnberg. The woodcut of the Ruff is almost identical to that in the English edition, but it, too, has been somewhat gaudily coloured by hand. The translation is much nearer to the original than the Augsburg edition.

Mr. Mullens, in his article above referred to, states that the English pamphlet at the time of its publication "must have attracted considerable attention and have achieved a somewhat extensive circulation"; it is certainly very remarkable that translations should have been immediately published at Middelburg, Augsburg and Nurnberg.

As regards the meaning of the word Calcars; reference to the *New English Dictionary on Historical Principles* (Vol. II., 1893), shows that Calcar=Calker=Astrologer, so that there need be no further speculation as to this; curiously enough, this interpretation is corroborated by the fact that the word Calcars, in the Nurnberg edition, is translated *Sternschern*=Star-gazers.

It may be worth noting that the late Professor Newton pointed out that though the frill, or "ruff," of the male bird has been compared with that of Elizabethan or Jacobean costume it is, however, essentially different, since that was open in front and widest and most projecting behind, whereas the bird's decorative apparel is most developed in front and at the sides and scarcely exists behind. The Professor was uncertain whether the bird was named from the frill or the frill from the bird. (Newton: *A Dictionary of Birds* (1893-6), p. 798).

HUGH S. GLADSTONE.

PARASITISM OF BLACK-HEADED GULLS.

THE Tufted Duck (*Vyroca fuligula*) on a large reservoir near London feed at fairly regular hours during the day-time, and as soon as they begin parties of Black-headed Gulls (*Larus ridibundus*) at once resort to it. They have established a definite parasitic relationship with the duck, and this is the method. A bird dives and a Gull (sometimes a pair) at once flies over to its neighbourhood and settles on the water. As soon as the duck reappears, the Gull flies up from the water, hovers a yard or so above the duck's head, and then (quite gently) drops down upon it. The duck dives again, and nine times out of ten drops the food, the Gull half submerging to recover it before it sinks. What the ducks were

feeding upon I could not make sure, but it was neither fish nor weed—probably *Ancylus*, *Limna* and other molluscs. All the Gulls on the water (there were thirty-five among ninety-seven ducks) pursued this method; the stoop was obviously made with the intention of flustering the duck, and the stratagem was nearly always successful. I have noticed an amateurish parasitism among Lesser Black-backed Gulls (*Larus fuscus*) and Black-headed Gulls pursue Lapwings, but this manœuvre was orderly, professional and precisely executed. In no ornithological works I have read have I seen mention of this interesting relation. H. J. MASSINGHAM.

ABUNDANCE OF BRAMBLINGS IN SOUTH OXFORDSHIRE.—Mr. J. L. Hawkins writes that on December 23rd, 1920, he found large numbers of *Fringilla montifringilla* feeding under the beech trees at Harpenden, near Henley. He estimated their numbers at a thousand.

INCURSION OF WAXWINGS.—Several reports have reached us of Waxwings (*Bombycilla garrulus*) having been seen during the present winter, and they seem to be more numerous than in most years, though in nothing like the numbers of 1913-14. Thus, Mr. G. Tickner informs us that a male was shot at Shifford in south Oxfordshire on January 20th, 1921; Major J. Chichester reports (*Field*, February 12th, 1921) one seen during the last week of January near Worcester; Mr. W. B. Nichols writes that four were shot from a flock of twelve about the middle of that month, at Dovercourt, Essex; Mrs. Paterson reports seeing four near Stocksfield-on-Tyne, Northumberland, on the 30th; Mr. J. L. Hawkins that one was picked up dead, after flying against wire, on February 5th, near Sonning, Berkshire; while Mr. A. McLean informs us that a pair were caught at Larkhall, Lanarkshire on the 7th. For occurrences in Norfolk in December 1920 reference may be made to Mr. Gurney's twenty-seventh Annual Report (*supra*, p. 246), in addition to which Mr. Farman reports flocks of 10, 7 and 4 at Haddiscoe on March 1st, 1921, the flock of 10 having been seen there during the previous three weeks.

RED-THROATED DIVER AT RICHMOND, SURREY.—Col. R. Meinertzhagen informs us that he saw a Red-throated Diver (*Colymbus stellatus*) on the Upper Penn Pond, Richmond Park, on February 13th, 1921, while Mr. J. E. S. Dallas saw it there on March 13th and Mr. C. Eorner on the 20th.

FOOD OF THE WATER-RAIL.—Mr. J. F. Peters informs us that another Water-Rail (*Rallus aquaticus*) shot on the Gowan River, Westmorland, on February 24th, 1921, also contained remains of crayfish (cf. *antea*, p. 211).

REVIEW.

The Relation of Song to the Nesting of Birds. By J. P. Burkitt. *Irish Naturalist*, January 1921.

IN a very interesting article with the above title, Mr. J. P. Burkitt refers to various aspects of the song and nesting of birds, but his main point "is to show that with at least a certain number of well-known songsters, mating seems to put a brake or a stopper on the song; and that we should have comparatively little song from them were it not for unmated males and the recrudescence of song where there are second broods." He has made careful observations on individuals of eight species, namely, Chaffinch, Yellowhammer, Chiffchaff, Willow-Wren, Lesser Redpoll, Sedge-Warbler, Grasshopper-Warbler and Whitethroat; all his observations are near Enniskillen. His conclusions are that the Yellowhammer almost ceases to sing after it has got a mate; the Chaffinch, Willow-Wren, Grasshopper-Warbler and Whitethroat when the female begins to sit, that only the Chiffchaff and Redpoll sing much, or at all, after the young are hatched; and that, consequently, the vast amount of bird song is from birds before mating, or from mateless males that may sing on right through the summer till the moult. He also suggests that the Redpoll's flying trill is not strictly comparable to other bird songs. This leaves only the Chiffchaff as an exception to his general rule. He concludes that "one common notion about bird song seems, at least in these cases, to be just the one thing we can safely deny, namely, that the male sings chiefly to please a sitting mate." This is certainly a remarkable conclusion, but Mr. Burkitt has evidently only reached his conclusions after careful and systematic observation.

It would be interesting if ornithologists in other districts could make careful observations on individual birds of various species in the coming season. For my own part, I do not feel able either to support or to criticize his conclusions, though I confess when first I read of his observations on the song of the Whitethroat and other birds I was rather incredulous. Can it be that his rule is liable to exceptions where a species is so abundant that the males are constantly coming in contact with their neighbours? I can scarcely believe, for example, that "all Willow-Wrens singing on loudly and steadily are mateless" in some of the copses and birch-clad commons of Kent and Sussex; and I have seen a Reed-Warbler in a Romney Marsh reed-bed where the birds were swarming, with its beak full of food, in full moult, singing lustily in mid-July.

H.G.A.

LETTERS.

OBSERVATIONS ON THE CUCKOO.

To the Editors of BRITISH BIRDS.

SIRS,—Residing within a mile or so of the locality whence these observations have been recorded (*antea*, p. 218, etc.), and this district being so well known to me, I have not infrequently been asked as to any opinions that I may have respecting same.

If, as I am given to understand, Mr. Edgar Chance has been collecting in addition all the eggs of the Cuckoo that he can obtain from a

considerable district around this particular small "common land," it would, I think, be of additional interest if he had also given particulars of the other variations and numbers obtained. Might I also suggest that in every instance where the eggs are not actually found by him personally *in situ*, they should be clearly recorded as such, as rewards given indiscriminately to an unlimited number of searchers do not, as is within my knowledge, give reliable scientific results. Personally, I am not yet satisfied that the large series of eggs taken have been proved to be the product of the one Cuckoo and not the eggs of two or more closely related females. The Cuckoo is always common in that particular neighbourhood, and a number of females always frequent the area under consideration. I have in mind other localities where I have known the same type of egg to occur for very many years past, practically to the exclusion of any other variation—no doubt the layings of closely related birds, inheriting, as I believe is usual, one particular type. Again I have known eggs identically the same in marking found at a distance of two miles, and another instance of fully two miles and a half apart. If in each case they were the product of one female, it proves what an unrestricted area they will sometimes cover, and the lack of chosen fosterers—Reed-Warblers (*Acrocephalus scirpaceus*) in both instances—could not be the explanation, as numbers of such nests with incompleted clutches were so much closer at hand sufficient, indeed, if the laying of the Cuckoo is so prolific, to have produced even more startling results than those recorded. My personal experience of the proportion of Reed-Warblers used as fosterers by the Cuckoo in the locality referred to works out at about 10 per cent.

That one female Cuckoo does not necessarily dominate any favoured locality is, I think, well known, but an interesting instance came under my observation last year when my son and I found three distinct variations of eggs on the same day and all within a distance of 200 yards.

Referring to the remarks on the rapidity with which the egg of the Cuckoo is laid and deposited within the nest, this I feel is also open to considerable doubt. Is it not more probable that the eggs were in each instance laid at some distance from the selected nest and then brought to the site of observation before being deposited, and this further process at times being considerably delayed, perhaps owing to the presence of the observers themselves.

Apart from the observations under criticism I should like to ask if any of your readers with personal experience of finding two eggs of Cuckoo within one nest have been satisfied they were actually the product of the same female.

J. S. ELLIOTT.

DOWLES MANOR, BEWDLEY.

SIRS,—In my notes on Cuckoos I find the following which may be worth recording:—

On May 20th, 1895, a Cuckoo laid an egg in a nest of the Cirl Bunting (*Emberiza cirlus*). The nest was not completed, and the Cirl Bunting laid her first egg on 23rd. She laid four eggs, and I then took away the Cuckoo's egg as we preferred that she should rear her own brood. This was near Boldre, Hants.

On June 12th, 1918, a Cuckoo laid an egg in a nest from which six young Wood-Warblers (*Phylloscopus sibilatrix*) had flown four days previously! This was in Kent.

E. G. B. MEADE-WALDO.

HEVER, KENT.

KESTREL TAKING A DUST-BATH.

To the Editors of BRITISH BIRDS.

SIRS,—I am much interested in Mr. Ruttledge's letter. I have not had an opportunity of seeing a wild Kestrel take a dust-bath, but judging from the behaviour of the bird in captivity, no doubt the habit is a constant one. My experience may be worth recording. I had in my possession for nearly thirteen years an eyess female Kestrel. She was seldom placed on the screen perch, but was kept on a block surrounded with sand, and in this she frequently took a bath with the greatest enjoyment, although she always had a water-bath when my Peregrines were offered theirs on the lawn. If allowed, she would also dust on a gravel path. The maintenance of health and beautiful plumage was greatly assisted by these cleanly habits.

During the long period named this little falcon lived in perfect condition, moulting every year with the utmost regularity, her primaries growing rapidly, quite free from weakness or hunger-trace.

R. E. COLES.

NEW MILTON, HANTS., *March, 1921.*

SIRS,—I do not remember to have seen Kestrels taking dust-baths in this country, but in southern Europe and north Africa it is by no means unusual to see both the Common Kestrel and the Lesser Kestrel doing so. I have seen a score or more of the latter dusting within a few yards. In north Africa the Lanner may often be seen dusting, and the Little Owl dusts, like a Partridge, wherever it is.

E. G. B. MEADE-WALDO.

HEVER, KENT, *March 17th, 1921.*

IMMATURE SPOTTED SANDPIPERS.

To the Editors of BRITISH BIRDS.

SIRS,—I have recently been reading Mr. Coward's book on *The Birds of the British Isles*. In it he states concerning the Spotted Sandpiper (*T. macularia*): "The most constant distinction is that the broad brown bar on the secondaries is continuous." I used to regard this as the decisive mark myself, until I shot a bird in Sussex which had a continuous bar of the same width all across. The authorities at the British Museum settled that it was nevertheless a Common Sandpiper (*T. hypoleuca*) and asked to retain it as an unusual specimen; it is now on view with wings extended in the bird gallery. This test must therefore be abandoned, and as far as I can make out in the case of immature birds, the only distinctions lie in the shorter and stouter beak (probably somewhat variable) and the slighter markings at the side of the fore-neck. If there is any other distinction, perhaps someone will kindly set it forth.

E. C. ARNOLD.

[As in the Common Sandpiper the brown band on the secondaries is usually broken, this test should not be abandoned, but those birds which have the band continuous should be critically examined. Miss A. C. Jackson (Vol. XII., p. 41) gives the following further distinctions in the juveniles of the two species. The Spotted Sandpiper has "the lower throat white, not streaked olive-brown and the feathers of the sides of the breast uniform greyish-olive-brown with very faint buff tips and without the faint subterminal sepia markings usually present in the Common Sandpiper."—Eds.]

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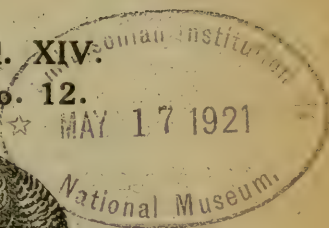
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BIRD PHOTOGRAPHY ON A CITY LAKE.

BY

GEOFFREY C. S. INGRAM.

THE lake here referred to is situated within 500 yards of the north-east boundary of the City of Cardiff. Roughly half a mile in length, it varies in width from 400 to 650 feet. In the winter it is visited by a large number of ducks of many species, mostly Tufted Duck (*Nyroca fuligula*), Pochard (*N. ferina*), Wigeon (*Anas penelope*) and Mallard (*A. platyrhynchos*). Scaup Duck (*N. marila*) and Goldeneye (*Bucephala clangula*) in small numbers have frequently been recorded, and there are also records of occasional visits from Common Sheld-Duck (*Tadorna tadorna*), Teal (*A. crecca*), Shoveler (*Spatula clypeata*), Pintail (*A. acuta*), Long-tailed Duck (*Clangula hyemalis*), and Smew (*Mergus albellus*). Coots (*Fulica atra*) in large numbers, Moor-Hens (*Gallinula chloropus*), and Little Grebes (*Podiceps ruficollis*) are constant visitors, and there is one record of a visit from a Slavonian Grebe (*P. auritus*).

It was with the idea of trying to obtain some photographs of the birds which were on the lake during a recent cold snap, that my friend H. M. Salmon and I constructed a shelter on one of the five islands which are dotted about at its northern end, and before daylight on December 5th, 1920, we were in hiding and waiting for whatever might turn up. There was a high northerly wind blowing right down the lake, and the only shelter was among the islands, so we were hopeful that we should have good sport. The only birds seen that day were Tufted Ducks, Mallards, Coots, Moor-Hens, and three Little Grebes. They were a little shy of the "hide," especially the Tufted Ducks, and with the exception of one Little Grebe, rarely ventured nearer than 50 feet. Even with the aid of a 17" telecentric lens the image on the plate at such a distance was very small, and we got no good results that day. The Little Grebe mentioned, came within six feet of us, and was observed to be catching and eating small fish.

Photographically, our next visit, made on December 12th, was the most successful. A strong and bitterly cold east wind was blowing. We had added to the disguise of our "hide" and were ensconced therein while it was still dark. The splashes of diving Coots, sounded from all around, and before it was properly light, they were feeding within 20 feet of us. They were joined by a few Tufted Ducks and at times

approached even nearer, but owing to the poorness of the light, photography was out of the question, and up till 10 a.m. we had to sit still and watch. It was most interesting and



TUFTED DUCKS, AND COOTS.



MALE TUFTED DUCK, AFTER A DIVE.
(*Photographed by G. C. S. Ingram.*)

amusing to watch the Coots following the Tufted Ducks around, and profiting by the latter's labours. As long as the ducks dived, the Coots were content to pick up from the surface of the water the food stirred up by the submerged

birds, but as soon as the ducks rested from their labours, the Coots would commence diving operations. Scattered about in front of us were little groups made up of one or two Tufted Ducks, with two or three Coots attendant upon them. The ducks rested constantly, turning up on their sides to preen, paddling around in little circles as they did so. At other times they would sleep, burying their beaks among their back feathers, sometimes drifting, or gently paddling themselves along, at other times, keeping their stations as though



FEMALE SCAUP DUCK, AND HER ATTENDANT COOTS.

(*Photographed by G. C. S. Ingram.*)

anchored. The Coots *never* seemed to be at rest for a moment, but were constantly on the move, changing their feeding spots, diving, or picking up food from the surface. One was seen to peck an old male Tufted Duck to hurry him out of the way, and every now and then an individual with neck outstretched would swim rapidly up to a bird that had invaded its feeding territory, and explode in its face with the familiar "punctured tyre" note, following this up by pecks if the invader did not retire fast enough.

Two Coots were noticed in close attendance upon a bird

which we at first took for a female Tufted Duck, but a closer and more careful inspection proved it to be a young female Scaup Duck. The white ring of feathers at the base of the beak was conspicuous. When diving it remained under water for considerably longer periods than the Tufted Ducks, and it was noticeable that it kept apart from these birds, although it could not get rid of the Coots. Fortunately it came near enough for us to obtain some photographs. Later on, another single female of this species was seen.

Soon after 11 o'clock, our attention was attracted to a bird flying directly towards our "hide," uttering a loud and clear whistle as it came. Its flight, with partly flexed, and rapidly fluttering wings, was very like that of a Common Sandpiper. It alighted at the edge of the water, at the very foot of our "hide," and within four feet of us, and we had not the slightest trouble in identifying it as a Green Sandpiper (*Tringa ochropus*) the first to be recorded for this district. Cautious but unsuccessful efforts were made to get a camera focussed upon it, but it was too near and an unfortunate shake sent it off with a loud alarm whistle.

Half an hour later, snow began to fall thickly and very soon everything at a greater distance than 20 feet was blotted out. The sleeping Tufted Duck were quickly covered, and presented the appearance of some strange new species. The Coots were diving too often for the snow to remain on them very long, and at this time, eight of them, and some half a dozen Tufted Ducks were feeding within eight feet of the "hide."

On December 19th, we launched our boat in the darkness of early morning, only to find that the lake was frozen and the islands completely shut in with ice. The loud voices of ducks from the opposite side seemed to promise open water there, in the shelter of the trees and bushes. Walking around we got into hiding beneath some bushes and as soon as it was light we saw that a long and narrow strip of water bordering the shore was unfrozen and crowded with birds.

We counted over 200 Coots, and 150 Tufted Ducks, and besides these there were a few Mallard, three immature male Scaup Ducks, and two male Pochards. Right opposite us a party of twenty to thirty Tufted Ducks were feeding or resting, and we examined these very carefully through glasses. They were all undoubtedly Tufted Ducks, and yet a number of them might easily have passed as Scaups. One bird in particular had a deep band of perfectly white feathers at the base of its beak, but the "tuft" on its head was unmistakable. Other birds with white or buff patches of

varying depth, on their faces, were also among them. Out of a number of adult males two were very conspicuous by reason of the splendid "tufts" they wore, the ends of which touched their backs.

As we watched, four more Pochards arrived, a male and three females, and were closely followed by an adult male Tufted Duck accompanied by a smaller bird which we failed to identify on the wing. They alighted on the ice, and from there plunged into the water, where the strange bird began to dive at once. It turned out to be an adult female Smew, a somewhat rare visitor. It kept as far off shore as possible, and was very wild and suspicious, offering no chance of photography except at very long range.

Photographic data may be of interest to some. A $\frac{1}{4}$ -plate reflex camera was used on a stand, and its focal plane shutter was set at $1/60$ second. The lens was a Ross 17" telecentric, and the aperture F 6.8. The best results were obtained on super-speed plates, speed 500-550 H. & D. The above-mentioned shutter speed was found to be too long for birds swimming quickly and moving directly across in front of the camera, and in nearly every case the heads of the Coots were blurred, owing to the rapid rate at which they were moved.

“TERRITORY IN BIRD LIFE.” *

BY

H. G. ALEXANDER.

“EVERY kingdom, every province,” wrote Gilbert White, “should have its own monographer.” After reading Mr. H. Eliot Howard’s latest book one is tempted to add “every meadow and every cliff.”

The purpose of the book is to show that a great deal of the peculiar behaviour of birds during the breeding-season, commonly supposed to be connected with sexual selection, is in fact due to the necessity for each pair of birds to have its own territory for breeding purposes. Early in the spring, Mr. Howard points out, not only the so-called “migrants,” but practically all other species too, change their winter gregariousness for a spring exclusiveness, and repair to definite territories, whether it be a few feet of cliff in the case of a Razorbill, a part of a swampy meadow in the case of a Reed-Bunting and a Lapwing, or of a copse or woodland or garden in the case of a Chaffinch and a Willow-Wren. This territory is defended against all invaders of the same species, and often also, to some extent, against kindred species, first by the solitary male, and later, after the female has appeared, by the two birds equally. Hence the fighting that takes place amongst birds during the mating-season. Song, too, as well as warfare, is closely connected with the defence of the territory; on the one hand, it is a warning to other prospective occupiers that the territory is already occupied; on the other, it gives notice to the arriving females that a male bird, with territory duly occupied, awaits a mate.

Mr. Howard also shows why birds require such a territory during the breeding-season. At other times the flock can wander at will, and every member has an equal chance when a good feeding-ground is found. But in the breeding-season, not only are suitable nesting-sites required but, far more important than this for most of the small birds, a plentiful and continuous supply of food must be obtainable at the shortest possible distance from the nest in order to prevent a heavy infant mortality. This fact, urges Mr. Howard—and the present writer partly agrees with him—is the true explanation of migration, a habit which would long ago have died

* By H. Eliot Howard, pp. xiii., 308. London: John Murray.
21/- net.

out if it were only a rather useless relic of the ice-age. Indeed, he practically defines migration as the journey that is undertaken—whether it be a hundred yards or a thousand miles—at the season when the gregarious instinct gives place to the exclusive instinct, and *vice versa*.

The book seems to me a convincing exposition of a theory that in general, as the result of rather different observations, I already held. There are, however, various considerations that Mr. Howard seems to me to overlook, or on which he lays insufficient emphasis.

My first criticism is that he almost ignores the fact that many birds are known to return to the place where they were bred. He gives a belated recognition of the fact in the second part of his last chapter, but he does not seem to realize what an important bearing it has on his whole theory. A bird begins its life in a restricted territory; the first journey it undertakes is the autumn journey, not the spring one; the spring journey is, in very many cases at any rate, merely a return along the old tracks. So that the overpowering impulse to seek a territory in spring is not a completely new instinct even in the first year; it is essentially a "homing" instinct. And this, surely, accounts very largely for the varying numbers of species in a given district from year to year; if a large proportion of the young survive their first winter the number will increase; if old and young both perish there may be none, until some neighbouring district becomes too heavily populated. Of course, if a bird returns to its old home and cannot establish itself by reason of competition, it may have to wander to some new locality, and thus, as Mr. Howard shows, the breeding-range may increase. I have known a Reed-Warbler appear on a marsh in the middle of June in the south of England; and last year near Birmingham a Chiffchaff appeared in a locality in June and sang constantly every day for the next month or more; but in neither of these cases, so far as I observed, did a mate appear, so that the attempt at fresh colonization was a failure.

Again, it does not seem to me that Mr. Howard estimates the relationship of the female to the territory and to the male correctly. He admits near the end of the book that the recovery of marked birds shows that the female, as well as the male, is apt to return to its old home to breed. But earlier in the book he pictures the male arriving first and the females wandering round without any special inclination towards any special place, until they happen to encounter unmated males defending a territory. My own impression

is that most birds pair for life ; my reasons for believing this are, first, that one very often finds birds in pairs in their winter-quarters : even ducks, whilst in flocks during the winter, very often break up into pairs. Stonechats, Black Redstarts, and Firecrests occur in pairs in their winter-quarters ; and my own experience is that flocks of Finches during mid-winter usually contain approximately equal numbers of both sexes, and that Redwings and Fieldfares often seem to be paired before they depart. Again, I have observed cases in which it appeared to me that the female reached and occupied the old territory first. Also, the pair occasionally arrives simultaneously, and so presumably both together. I have just seen a pair of Wheatears travelling together. Of course, I do not deny that the male normally arrives first ; there may well be a physiological reason for this, and it may also have a survival-value, as suggested by Mr. Howard.

Nor, I think, is the contrast between the breeding-time behaviour and the behaviour during the rest of the year quite as thorough as Mr. Howard suggests : Robins, Stonechats, Black Redstarts, and possibly some other birds, undoubtedly keep off intruders from their autumn and winter residences. Further, I have some fairly good evidence for believing that many birds' winter wanderings take them, subject, of course, to some extent to food-supply and climate, to the same winter-quarters, and also to the same resting-places in spring and autumn, year after year. Undoubtedly a great many birds lose the exclusiveness of their territorial instinct after the breeding-season is over ; but I believe birds are more conservative with regard to the journeys they undertake than is often supposed.

There are other respects in which I think the seasonal contrast is less sharp than Mr. Howard suggests ; thus, I have not infrequently heard Buntings singing, and Chaffinches also, whilst still in flocks ; nor is the song in winter-quarters or on migration invariably, as Mr. Howard suggests, a feeble, spasmodic affair.

I think, too, that a difference in kind, not merely in degree, ought to be recognized between the territoriality of the small land-birds and that of the cliff-breeding birds. Most small passerine birds get all their food within their territory ; the cliff-breeding birds merely require a nesting-site. It is misleading to say that a Herring-Gull "*cannot be allowed* so much space as a Bunting." The point is that it *does not require* so much space, seeing that there are no territorial

limits to its feeding-territory. It is confusing and misleading to apply the "territorial" theory to cliff-breeding and other gregarious birds; and I do not see that Mr. Howard makes out a good case for distinguishing between the cliff-breeder and such birds as Rooks. It may be true that Rooks are gregarious breeders from choice and Guillemots from necessity, but so far as the appropriation, defence and limitation of the territory of each pair and the feeding of the young are concerned, the position is identical.

Altogether, I wonder whether Mr. Howard is not generalizing from wholly insufficient data. That he has made out a good case for the importance of the territory to the majority of English passerine birds is, I think, undeniable; but his attempts to apply his theory to cliff-breeding sea-birds, and to the frequent "mobbing" of large birds of prey by smaller species, seem to me to rest on unsound arguments; whilst he nowhere shows that he has tried to discover whether his theory is applicable to birds that live in tropical forests, or in other parts of the world. It may be that the territory is more important in temperate regions of variable climate and, consequently, uncertain food-supply than in any of the "well-regulated" climates, both north and south.

Mr Howard shows, I think, conclusively, that both song and migration have a certain "survival-value" in relation to the acquisition and securing of a territory; with regard to song, his observations seem to confirm those recently described by Mr. J. P. Burkitt in the *Irish Naturalist*. But it seems to me that Mr. Howard gives too little attention to other important aspects of these two habits. The fact that they have a "survival-value" connected with the territory does not prove that they have no other value.

My experience (or lack of experience) leads me to wonder whether Mr. Howard does not exaggerate the amount of fighting in which birds indulge. I think the impression made on most readers of this book would be that birds spend as much time fighting each other as they spend in feeding or singing. Personally, I very rarely see birds fight.

One other small point. I am pretty certain that most Greenfinches that breed in England, like most Linnets, are not the birds from local stubble-fields, but are spring immigrants. This would account for the fact on which Mr. Howard comments, that, unlike some other Finches, they do not appear at their breeding-places at all until late March or April and then stay there all day long. He also seems not to realize that the flocks of Lapwings, Chaffinches and

other species that abound in winter and spring are mixed flocks, including immigrants from farther north or even overseas, as well as the local residents, or some of them.

I confess I also feel that Mr. Howard's book might have been much shorter—with less repetition of arguments and more reference to observation.

There is no doubt, however, that he has, as the result of much close observation, contributed an important chapter towards the fuller understanding of bird-life. And it is because my own observations have been largely along lines parallel to his, and have led me to similar conclusions, that I have ventured to criticize some aspects of his theory, whilst fully endorsing his general contention, and admiring the care and thoroughness with which he has worked it out.

NOTES ON SOME BIRDS SEEN IN SOUTH UIST IN OCTOBER AND NOVEMBER 1920.

BY

COLONEL R. MEINERTZHAGEN.

No attempt has been made in the following notes to mention every bird seen, and only those of interest are included.

I was in South Uist from the middle of October to the end of November. We experienced a southerly to south-westerly wind during the whole period, which on November 15th attained the force of a gale with a velocity of over ninety miles an hour. The effect of this on bird-life has already been described (*Bull. B.O.C.*, XLI., p. 57).

STARLING (*Sturnus v. vulgaris*).—The resident Starlings do not appear to differ in the slightest from British specimens, except that the spotting in the autumn plumage is perhaps not so intense in the former. A common resident.

Numbers of migrants were also in evidence, all on the west coast. Only residents were seen on the east coast.

CORN-BUNTING (*Emberiza c. calandra*).—There is a small resident colony at Grogarry Lodge. Of six obtained between October 27th and November 14th all were moulting in the outer primaries.

SNOW-BUNTING (*Plectrophenax n. nivalis*).—The first arrivals, a pair, were noted on November 10th.

BLACKCAP (*Sylvia a. atricapilla*).—A small party of females on passage were at Grogarry Lodge on the morning of November 1st, but were not seen again.

HEBRIDEAN SONG-THRUSH (*Turdus ph. hebridensis*).—A common resident, being more plentiful on the east coast than on the west. I never saw, so far as I am aware, any other race of the Song-Thrush.

GREENLAND WHEATEAR (*Enanthe æ. leucorrhoa*).—A few females were still passing up to October 26th.

BRITISH STONECHAT (*Saxicola t. hibernans*).—Quite common.

CONTINENTAL REDBREAST (*Erithacus r. rubecula*).—I only saw a Robin on one occasion, on October 27th, which proved to be a Continental bird.

HEDGE-SPARROW (*Prunella modularis*).—Two were obtained in late October. They are both very dark on the back, the one having the wing formula of *P. m. occidentalis* and the other of *P. m. modularis*. It is impossible to say whether these were resident or migrant birds.

WREN (*Troglodytes troglodytes*).—A quite common resident.

Birds seem to resemble the Shetland form in colour, but the size is nearest to the typical race. In a large series it may be advisable to give the Hebridean bird subspecific rank.

BRITISH DIPPER (*Cinclus c. britannicus*).—Though I searched the streams for these birds and though conditions were ideal, I never saw a Dipper, neither did the keepers know of the bird in the island. It therefore astonished me to see Guthrie (*Ann. Scott. Nat. Hist.*, April 1903) reporting it as common and resident. It has certainly disappeared since Guthrie wrote.

HEN-HARRIER (*Circus cyaneus*).—We saw birds every day, and they seemed fairly common.

SPARROW-HAWK (*Accipiter n. nisus*).—A party of three, obviously on passage, were seen on October 28th travelling south together.

GREY LAG-GOOSE (*Anser anser*).—The Grey Lag-Goose is, as far as I was able to ascertain, a resident, and its numbers are not increased in winter by strangers. The breeding stock in South Uist is about 200 pairs, and this number has not varied much during the last few years.

WHITE-FRONTED GOOSE (*Anser albifrons*).—A common winter visitor, the bulk arrived in 1920 during the first week in November.

BARNACLE-GOOSE (*Branta leucopsis*).—The Barnacle-Goose usually arrives in South Uist during the last fortnight in October, but in 1920 they did not arrive till November 4th. I was fortunate in witnessing their arrival. I was in the centre of the island on Hecla Mountain, when we heard their call. On looking up we saw some 2,000 Barnacle flying overhead from the east and at about 3,000 feet above sea level. They were in small parties of thirty or forty birds. When directly over our head they were attacked by a couple of Peregrines, who spread alarm by stooping through and through the flocks, driving them to ground in zigzag flight and breaking up all the formations. The Peregrines seemed to be merely playing with the poor birds, and I doubt if they meant business.

BRENT GOOSE (*Branta bernicla*).—A solitary Brent was shot in early November. It is curious that this bird, quite common in Barra and Benbecula, should be so scarce in South Uist.

SANDERLING (*Crocethia alba*).—None were seen till November 13th, when large flocks arrived on the west coast.

NOTES

SONG-PERIOD OF THE CIRL BUNTING.

I HAVE read nowhere a definite account of the song-period of the Cirl Bunting (*Emberiza cirrus*), and perhaps the following summary of my notes on this subject, taken during the past six years in the Budleigh Salterton district of S.E. Devon, may be worth recording.

January. . . I have only one date—the 6th—in this month.

February. . . The song may be heard almost any day, but it is not regular, and seems to depend on the weather.

March. . . }
April. . . } Every day and usually all day long.
May. . . }

June. Sings every day until about the 23rd. From the end of February to June 23rd may be called the full song-period, when the bird sings all day, repeating the notes so constantly that they become wearisome.

July. Only one date—the 5th.

August. One date—the 3rd.

September. Two dates—6th and 7th.

October. . . }
November. } All through these months—the minor period of song, which now has less power, and is less often repeated.

December. Three dates—10th, 16th and 26th.

The above is my experience so far, and it may yet be amplified. Possibly too the Cirl Bunting sings even more in other districts, though it is fairly common here.

W. WALMESLEY WHITE.

[Messrs. C. J. and H. G. Alexander (Vol. I., p. 372 and Vol. IV., p. 278) state that the song-period lasts from mid-February or the beginning of March to the beginning of September, and all through the winter. For really exact data of course, continuous observations on distinct and separate birds would be desirable.—EDS.]

SPRING MOVEMENTS OF PIED WAGTAILS.

THAT the Pied Wagtail (*Motacilla a. lugubris*), as well as the Grey Wagtail (*M. c. cinerea*), and to some extent the Yellow Wagtail (*M. flava rayi*), is gregarious in autumn at roosting

time, has been frequently noted, and on some occasions very large gatherings have been observed. Thus F. S. Mitchell (*Zool.*, 1881, p. 193) counted 450 Pied Wagtails passing into a high tree, which was already swarming with them, in Lancashire. Mr. Wallis's note (*antea*, p. 258) reminds me that similar gatherings have also been noted during early spring, though I am not aware of any published observations on this point. On February 25th, 1917, Mr. G. Tickner saw 18 Pied Wagtails resting on the pathway by the Botanical Gardens, at Oxford, at 5.20 p.m. Suddenly a stream of birds descended almost perpendicularly—not less than 200 in number—and covered the path and the adjoining bushes. They remained absolutely still on alighting, but after an interval of nearly half an hour rose and flew off. Quite three-quarters of these birds appeared to be males. Early in February 1920 about 20 Pied Wagtails came every evening to roost in the ivy-covered pillars which border the Clarendon Quadrangle, at Oxford. They continued to arrive in increasing numbers and about February 20th over 100 were counted by Mr. Tickner. From this time the numbers fluctuated from day to day, but towards the end of February and in March there were seldom fewer than 80 present. On March 14th, at 9.50 p.m., some alarm caused the birds to leave their roosting place, and for a short time the street was full of them, but they did not return. As on the previous occasion, the greater part of these birds consisted of males.

F. C. R. JOURDAIN.

MARSH-HARRIER ON THE WELSH BORDER.

ON the afternoon of March 24th, 1921, I saw a Marsh-Harrier (*Circus aeruginosus*) flying along a boggy hollow through which runs the brook dividing Shropshire and Montgomeryshire, just below Middleton Station. On describing the bird to the stationmaster, Mr. T. Manning, I learnt that he had seen it about a week earlier in the same place. I was there again on the 28th, but did not catch sight of it: the weather then was cold, wet and misty. It is over thirty years since the Marsh-Harrier was recorded in this district.

H. E. FORREST.

STONE-CURLEW IN BUCKINGHAMSHIRE.

THE latest definite reference given in Hartert's and Jourdain's *Birds of Buckinghamshire, etc.*, for the Stone-Curlew (*Burhinus α . *oedipnemus**) in the Chilterns is 1914, when it was breeding in Saunderton district (*British Birds*, Vol. VIII., p. 121).

In 1915 I several times watched Stone-Curlews feeding in the fallows near Bledlow; and on May 20th, 1917, I flushed a pair at midday on the slopes of a neighbouring hill. Dr. Hartert records having heard them over Tring in 1914 and 1915. I have also heard them crying over the Tring valley in 1919.

BERTRAM LLOYD.

ON THE OCCURRENCE OF THE ICELAND REDSHANK IN THE BRITISH ISLES.

THE Iceland Redshank (*Tringa totanus robusta*) described by Mr. E. Lehn Schiöler in the *Dansk. Orn. Foren. Tidsskrift*, XIII., p. 207, differs from *T. t. totanus* as follows:—The bill and feet are stronger and stouter, the wings are usually longer, and in breeding plumage, the upper-parts are darker and browner, the under-parts more heavily spotted and broadly barred black-brown. Mr. Schiöler gives the following measurements: Iceland breeding birds: 24 males, wing 157-171, bill 36.5-43 mm.; 15 females, wing 158-170, bill 38-45 mm. Danish breeding birds: 28 males, wing 145-160, bill 39-43.5; 20 females, wing 152-162, bill 40-46. It will be seen that the measurements of the two forms overlap somewhat.

I have examined all the Redshanks with British localities in the British and Tring Museums, but only six obtained in May and June can be regarded with certainty as British breeding birds. The remiges of these are necessarily somewhat worn. Their measurements are as follows: 4 males, wing 154-158 mm., bill 38-43 mm.; 2 females, wing 158-160 mm., bill 36-41 mm. In winter plumage, *T. t. robusta* can only be distinguished by its longer wing and stouter feet from *T. t. totanus*. Among the large series of Redshanks examined, obtained in the British Isles in all months of the year, I came across some that undoubtedly belong to the larger race which is probably a regular migrant to our shores. Measurements of these birds are given below.

NATURAL HISTORY MUSEUM, LONDON.

Remarks	Sex	Date	Locality	Wing	Bill
	♀	Nov.	Northumberland	168	44
	♀	4/2/01	Kent	172	42
	♀	8/12/10	North Wales	171	42

TRING MUSEUM.

	♀*	No date	Loch Fyne, Scotland	170	42
In breeding plumage	No sex	No date	Marocco	168	43

* The occurrence of these two birds has been pointed out by Dr. Hartert, cf., *Vog. pal. Fauna*, Vol. II., p. 1611.

H. F. WITHERBY COLLECTION.

Remarks	Sex	Date	Locality	Wing	Bill
	♂	31/3/97	Achill Island, Ireland	172.5	45

A. C. JACKSON COLLECTION.

1st winter	♂	15/10/13	Beaully Firth, Inverness	170	41
1st winter	♂	15/10/13	" " "	170	43
adult	♂	1/12/13	" " "	171.5	41
	♂	30/10/13	" " "	169.5	40
adult	♂	12/11/13	" " "	171	41
1st winter	♂	15/10/13	" " "	175	41
1st winter	♂	Dec. 13	Cley, Norfolk	172	45

ANNIE C. JACKSON.

STATUS OF ARCTIC TERN IN LANCASHIRE.

For some years, in the north-west of England, the Arctic Tern (*Sterna paradisæa*) has been missing, but is now, I am glad to say, returning. Mr. Howard Saunders, visiting the colonies on Walney Island, north Lancs., and Ravenglass, Cumberland, in 1865, then found this species and the Common Tern (*S. hirundo*) in about equal numbers, with possibly a preponderance of Arctic on Walney. About 1875, Mr. H. Durnford found the Common Tern the more plentiful on Walney, more than 75 per cent. belonging to that species. Revisiting these colonies in 1885 Mr. Howard Saunders failed to see a single Arctic Tern, the Common species having driven them away, as it had already done on the Farne Islands. Up to 1917 there was no sign of its return, but in 1918, Mr. T. A. Coward found some nesting in a south Lancashire colony, where in 1919 Mr. F. W. Holder found that, of those he marked with rings, just over 8 per cent. were Arctic. During the past summer of 1920 I spent over a month in this colony, and found of those marked with rings, that no fewer than 14.6 per cent. were Arctics. During the early part of the season they had to fight hard with the Common Terns to maintain their position and many battles royal breast to breast in mid-air, were witnessed between the two rival species, a certain proportion holding their ground, as shown by this percentage. In the Isle of Man the Arctic has either not been bothered by Common Terns at all or has been able to hold its ground against them, for it predominates, at any rate at the north end and of recent years. This driving away of Arctics by the more robust Common Terns is curious, for the Arctic is very much the more savage of the two as far as human intruders are concerned. H. W. ROBINSON.

INCURSION OF WAXWINGS.—In addition to those previously recorded (*antea*, p. 261) Mr. E. Arnold Wallis reports, that

from early in January 1921, three were seen frequently during three weeks at Ayton, near Scarborough, and that Mr. Green, a keeper at Thornton-le-Dale, informed him that five arrived there during the first week in February, and by the 13th their numbers had increased to thirty. They all left early in March. Mr. C. Oldham also informs us that one was seen at Marsworth, Bucks., on February 19th.

EARLY ARRIVAL OF WHEATEARS AND COMMON SAND-PIPER.—Mr. W. Miall Jones reports a male *E. æ. ænanthe* from the neighbourhood of Aberystwyth, Cardigan, on February 25th, 1921, and Mr. George Bristow two, at Hollington, Sussex, on March 13th. Mr. James Cairns informs us that he saw a *Tringa hypoleuca* at Elstow, near Bedford, on March 16th.

BLACK REDSTART IN LANCASHIRE.—Messrs. J. H. Riley and R. Morris inform us, that they saw a male *Ph. ochrurus gibraltariensis* at Darwen, on March 9th, 1921.

SNOW-GOOSE IN ESSEX AND GREATER SNOW-GOOSE IN SCOTLAND.—“A.H.G.” states (*Field*, January 29th, 1921, p. 126), that during a storm on January 10th, 1921, a Snow-Goose came down to the water at Barrington Hall, Harlow, Essex, and stayed four days. It accompanied some Canadian Geese which live there and fly about the neighbourhood, and was a good deal smaller than these birds.

Dr. W. E. Clarke states (*Scot. Nat.*, 1921, p. 48) that a Snow-Goose reported by Mr. C. W. Phillips to have been shot near Castle Douglas (Kirkcudbrightshire) “recently” (*Field*, March 5th, 1921, p. 299) was forwarded to him for examination and proved to be an example of the Greater Snow-Goose (*A. hyperboreus nivalis*) of which there is only one previous British record, viz., co. Mayo, October 1886. Mr. Phillips states that the bird was immature and that there were three Snow-Geese in all amongst a flock consisting chiefly of Bean-Geese, and that he had heard of these birds “all the winter.”



LETTERS



THE RELATION OF SONG TO THE NESTING OF BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the notice of Mr. Burkitt's article (*antea*, p. 262), I may state that some years ago I made very extensive and detailed notes on the subject. Unfortunately my notes were destroyed by fire, and I have only a short résumé by me of results based on my notes. My observations were made around Boughton Monchelsea, near Maidstone, during the seasons of 1913, 1914, 1915 and 1916, and dealt chiefly with the Chaffinch, Linnet, Chiffchaff, Willow-Warbler, and Common Whitethroat. I cannot say that the evidence of my notes leads me to agree with Mr. Burkitt's conclusions. H. G. A.'s suggestion that the abundance of a species may affect the duration of song is interesting, and certainly all the above-mentioned species are very numerous indeed in this district. Of the many pairs which I had under close observation, the song was in no way diminished during the period of incubation and after the young were hatched, only in so far that the male bird was occupied in helping to feed the young, and so had less time to sing. I have frequently seen a Willow-Warbler warbling away with its beak full of insects, and Whitethroats, after feeding their young, cast themselves into the air and give vent to their hurried scrambling song before darting off to hunt for more food. The Yellow Bunting I have only had under close observation once, and the male bird sang with fully fledged young in the nest. Every lane and hedgerow abounds with this species and their song can be heard all day until late July. Surely these cannot all be mateless birds!

Nightingales were unusually numerous here last year. A pair had their nest and reared their young close to my house, and the male bird sang intermittent snatches of song until the young were almost fledged. I have never studied the species before with attention to its song, so merely give the record for what it is worth. The Thrush-Nightingale (*Luscinia luscinia*) which I had ample occasion for observing on the Rhine during one season, does sing intermittently in snatches with well-grown young in the nest; in the little valley where I was staying the species was very common, and one could always hear two, three, or more singing at the same time, in close proximity to each other.

MARIE L. PARKER.

WIERTON COTTAGE, NR. MAIDSTONE.

OBSERVATIONS ON THE CUCKOO.

To the Editors of BRITISH BIRDS.

SIRS,—In justice to Mr. Edgar Chance, I feel it incumbent on me to write a few lines in reply to Mr. J. S. Elliott's letter (*antea*, p. 262). Few if any of the field-workers of the present-day are more punctiliously careful with regard to the authentication of eggs taken by them than Mr. Chance. Moreover, on several occasions Mr. Chance had the advantage of being accompanied by other ornithologists, and I have not the slightest doubt that every case was most fully and carefully investigated. Having also myself seen the series of 46 eggs—no two of which were laid in one nest—I certainly think that they furnish in

themselves proof that they are all the product of one female, and this view is supported by the fact that other hen Cuckoos have made use of the same nests on four occasions.

With regard to the suggestion that the eggs were laid by two or more closely related females, how are we to account for the fact that the intervals between oviposition are so uniform? Is it credible that another female was present on the same ground, laying a precisely similar egg, and invariably depositing it in a different nest, always on a date when the first hen for some unaccountable reason failed to lay? As to the time occupied in laying and depositing the Cuckoo's egg in the fosterer's nest, it is difficult to believe that five observers, all simultaneously watching at various distances from 40 to 120 yards and using powerful binoculars, could have been repeatedly deceived. The alternative suggested is pure supposition unsupported by direct evidence.

HERBERT MASSEY.

IVY LEA, BURNAGE, DIDSbury, April 11th, 1921.

SIRS,—The suggestion first made by Newton, that similar eggs of the Cuckoo from the same district might possibly be those of closely related females (perhaps mother and daughter) seems to be mere speculation, quite unsupported by proof. All the evidence points in the opposite direction. When the territories of two or more female Cuckoos overlap, it occasionally happens that the same fosterer is victimized by more than one bird, but out of the large number of cases of this kind, I have never known a single case in which there was satisfactory proof that both eggs were laid by the same bird. It is of course possible that an occasional lapse of memory occurs among Cuckoos, as it certainly does among ornithologists. In the case of a Cuckoo parasitic on a species like the Reed-Warbler it seems only natural that the breeding territory should extend for some considerable distance along the banks of a suitable stream, while another female parasitic on the Hedge-Sparrow or Redbreast might well have a much more compact and circumscribed territory. Even supposing that a fosterer's nest was pointed out to Mr. Chance by one of his assistants, a few minutes' watching would settle the point as to whether it was occupied by the parents or not, and the impossibility of providing a Cuckoo's egg of exactly required type to order, on a date when the Cuckoo under observation had for some unforeseen reason failed to lay, is manifest to anyone who has given the least attention to the subject.

F. C. R. JOURDAIN.

LIFTING AND WEIGHT-CARRYING POWER OF GOLDEN EAGLES.

To the Editors of BRITISH BIRDS.

SIRS,—From time to time discussions arise on this question. It would be interesting to learn if any of your readers have had personal experience, or obtained authentic records of actual weights lifted and carried by Golden Eagles. In a recent letter to *The Times* the writer, Mr. L. Ropner, of Stockton, states that whilst fishing on Loch Shiel, he saw an Eagle swoop, take up a fawn, and glide down the mountain side for about half a mile.

G. WITHERINGTON.

19, SUMNER PLACE, S.W.7.

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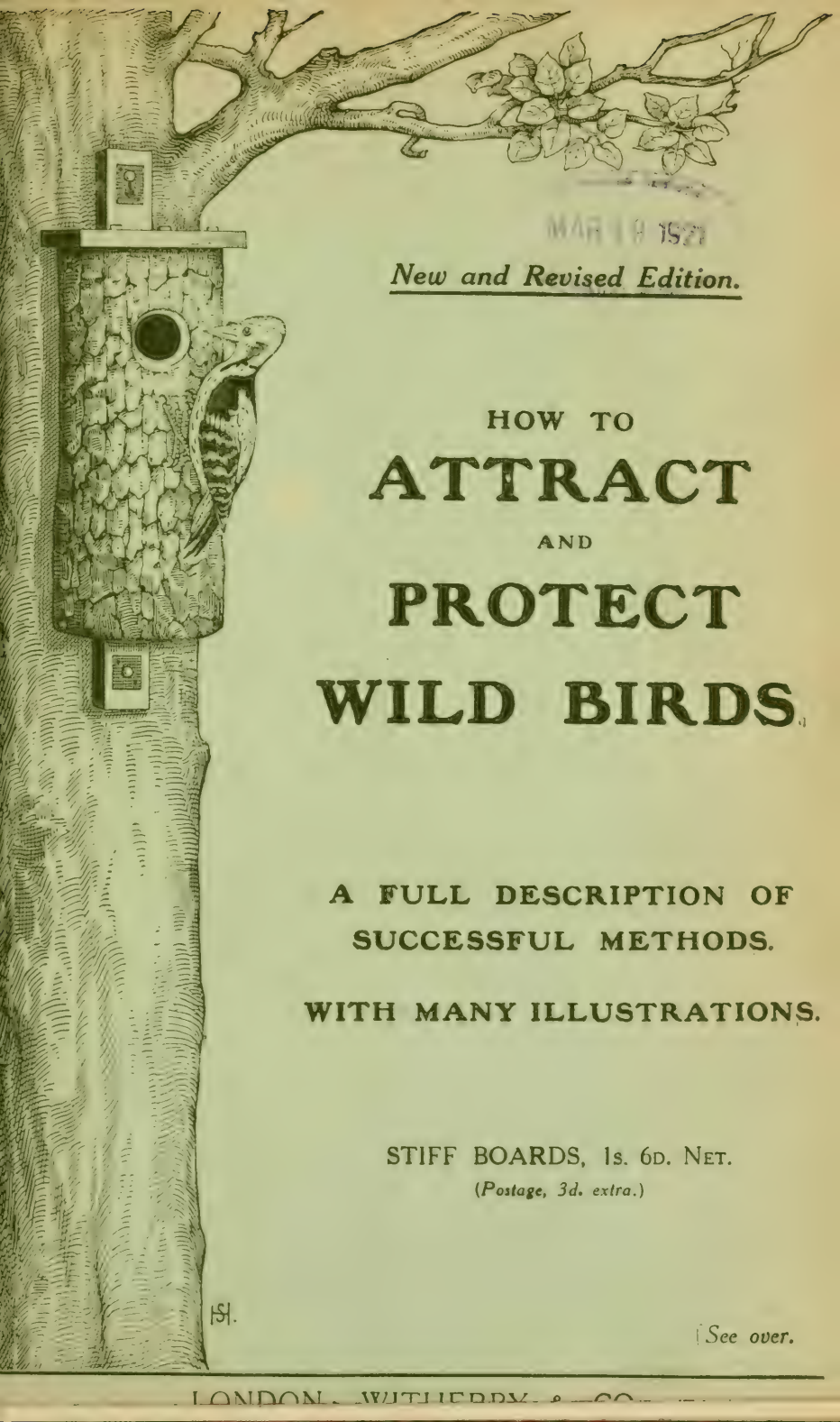
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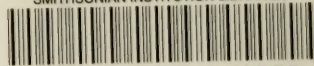
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